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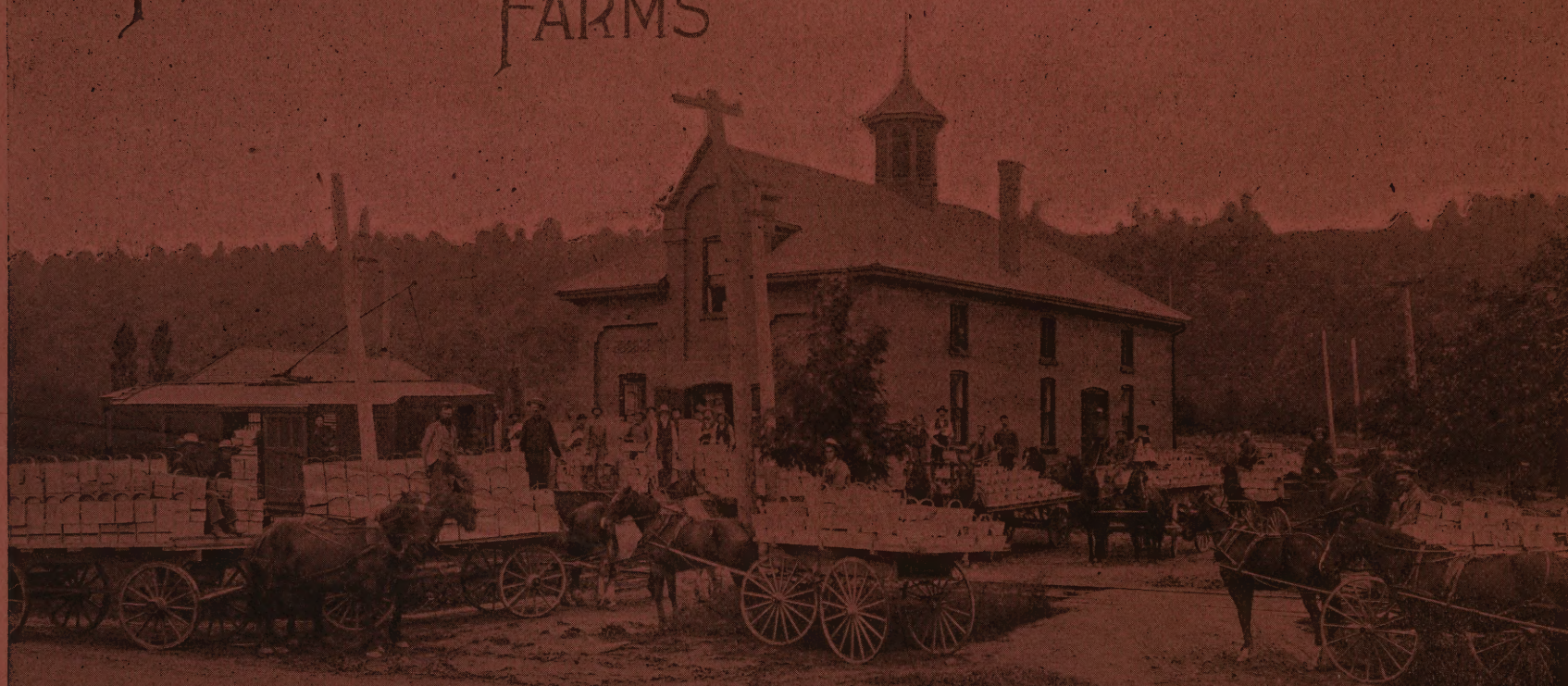


E. D. SMITH  
HELDERLEIGH  
FRUIT FARMS  
AND  
NURSERIES  
WINONA ONTARIO.





# HELDERLEIGH FRUIT FARMS



E.D. SMITH'S NEW BRICK FRUIT WAREHOUSE WHERE THE  
CELEBRATED STERLING BRAND OF FRUIT IS PACKED FOR  
SHIPMENT TO ALL PARTS OF CANADA & BRITISH MARKET  
C.P.R. EXPRESS & FREIGHT CARS LOADED HERE DAILY IN  
THE FALL FRUIT SEASON



CAPITAL  
\$1,250,000

RESERVE AND SURPLUS PROFITS  
\$750,000

TOTAL ASSETS  
\$11,000,000

# Bank of Hamilton

*J. TURNBULL, Cashier.*  
HAMILTON,  
CANADA.

## .. BRANCHES ..

|                |               |                |
|----------------|---------------|----------------|
| BERLIN         | LISTOWEL      | OWEN SOUND     |
| CARMAN, MAN.   | LUCKNOW       | PORT ELGIN     |
| CHESLEY        |               |                |
| GEORGETOWN     | MANITOU, MAN. | SIMCOE         |
| GRIMSBY        | MILTON        | TORONTO        |
| HAMILTON—      | NIAGARA FALLS | WINGHAM        |
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Descriptive Catalogue

.. OF ..

FRUIT

.. AND ..

ORNAMENTAL  
TREES

Shrubs, Vines, Roses,  
Hedge Plants,  
Etc., Etc.



Grown and For Sale at the

Helderleigh Fruit Farms and Nurseries

WINONA, ONT.

E. D. Smith, Prop.

ESTABLISHED 1882.









# Preface

To the Second Edition  
of My General  
Descriptive Catalogue

THE first edition, published in 1895, gave such general satisfaction and has been prized especially for the valuable information regarding planting, diseases of trees, etc., and their remedies, in addition to the accurate descriptions of fruit based largely on my own experience; so much. I have concluded to issue at once another edition, enlarged, improved, and modified to suit any more accurate information obtained since the last edition was issued.

This catalogue contains descriptions of all the latest additions to our fruit list that have been tested on the Helderleigh Fruit Farms, or in other places, to my satisfaction. I have omitted hundreds of old kinds that are useless and for commercial purposes might omit many more, but sometimes varieties are called for that are not commercially valuable and I grow them and offer them for sale to those who desire to buy them.

I endeavor to procure as soon as possible and test all new fruits that appear to have desirable qualities, and aim to keep fully abreast of the times and not to recommend varieties unsuitable for our climate. I aim to offer not only stock absolutely true to name but also a superior grade of stock. As much as possible the trees are dug with a machine, thus securing all the fibres, a thing impossible with spades. I have a large force of skilled and trusty employees, who have many of them lived and grown up with the business and who aim to make my establishment a synonym for a square and honest dealing firm.

I have exceptional facilities for shipping, having C. P. R. and T. H. & B. sidings on my farms, and Grand Trunk only a short distance away.

Moreover, having in bearing 125 acres of fruit, no doubt the largest lot of mixed fruit on one farm in Canada, I am able better to judge of the merits of new fruits, by comparing them with the old sorts. Besides, having made the handling and shipping of fruit a special business for twenty years, I am able to judge fairly well what to grow for profit and what to recommend for home use. I shall always be glad to answer questions, glad to show visitors over the fruit plantations or nursery grounds.

E. D. SMITH.



# Some REASONS for Buying NURSERY STOCK from Helderleigh Fruit Farms and Nurseries, Winona, Ontario.

**1st**—Stock is Canadian grown, which is an important matter. Foreign stock is grown by and gives employment to foreigners, who buy nothing from us that they can get as cheaply at home. Canadian grown stock gives employment to a large number of our own people, who consume and buy what Canadians have to sell, at better prices than export prices.

**2nd**—Canadian stock is delivered promptly from the ground in a fresh, thrifty condition, while foreign stock is always a long time in transit and is frequently delayed, especially at the frontier, and frequently arrives dead or in half dead condition, entailing heavy loss.

**3rd**—If stock bought of foreign nurserymen turns out untrue to name or diseased, you have no redress, you must just "grin and bear it," whereas if purchased from a RELIABLE, PERMANENT and CANADIAN firm, you have a remedy and can get the wrong righted promptly. At the present time United States Nurseries are in many cases infested with the dreaded San Jose scale.

**4th**—Much FOREIGN STOCK is not adapted to our climate, especially if grown South, and you cannot tell where it is grown as they buy and sell backwards and forwards between North and South, many Northern firms having nurseries in the South, where stock can be grown cheaply, on account of the longer season and cheaper labor.

**5th**—Canadian stock is not all good. There are certain sections where fruit, especially peaches and grapes, succeed better than in others, so there are sections where nursery stock does better also. To grow a sound, healthy tree, it must never be frozen in the nursery, or the new growth will overgrow the frozen wood, which turns black and finally rotten, and is called "black heart." Trees grown outside the peach belt are frequently frozen in this way. They were never frozen here. Beware of trees from nurseries where peaches and grapes do not thrive.

**6th**—To produce sound, healthy trees, the foliage should not be cut off by premature frost, either in Spring or Fall. The season of wood ripening is thus extended and the wood becomes mature and firm, whereas if leaves are taken off prematurely the wood not having hardened it is liable to be frozen in the winter. Here at Winona, under the base of the Mountain, where my nurseries are, the season is the longest in Canada. For thirty years no frost has injured grape shoots in the spring, and no crop has been injured before matured in the fall. The season is here from two to four weeks longer than most sections, often than places a mile away. The shelter of the Mountain and the tempering effects of Lake Ontario keep Jack Frost back. Hence I claim the nursery stock I offer is harder in the wood and better fitted for general planting in Canada than most that is offered.

**7th**—I am in a better position to have pure stock than most nurserymen. I have ONE HUNDRED AND TWENTY-FIVE ACRES IN BEARING FRUIT OF ALL KINDS, and can take my BUDS and SCIONS from BEARING trees, vines and bushes, and thus know they are PURE.

**8th**—I cannot too strongly impress upon you also the importance of dealing with known responsible men. I have lived on the land my father owned, all my life, and built up here a reputation and a business of no mean proportion, which is a certain guarantee of permanency. Do you not stand a much better chance of fair treatment than from unknown or irresponsible men? Or those with little or nothing at stake.

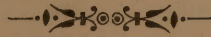
**9th**—My stock is graded with care, and being fully alive to the fact that a permanent business can only be maintained by furnishing good stock and treating my customers in an honorable manner. I furnish only the best that grows, and strive to deal justly by all men as good policy as well as good morality. This is too important a matter to shelve. There is nothing sold that opens a wider door to fraud and rascality than the selling of nursery stock, as it takes years to test its purity.

**Damaged Trees**—If stock is frozen when received, and if you have a cool cellar place the box in it unopened, and leave there until gradually thawed out. If you have no such place, unpack and bury at once in the ground, tops, roots and all, until thawed out. The former method is preferable, in either case there should be no loss. If, owing to any accident, stock arrives in a dried or shrivelled condition, bury entirely in wet earth and leave there for a week, when it will be found that the shrivelled appearance is gone and the stock plump and full of sap, and will grow all right.





# *Hints to Planters.*



## Preparations for Planting.



**P**LOW and subsoil, so as to thoroughly pulverize to a depth of 12 to 18 inches. Be sure the land is well drained, as no kind of fruit trees will thrive where the soil is saturated with stagnant water, except cranberries. New land requires no fertilizing, but old land should be so fertilized as to be in a condition to grow a good crop of corn or wheat. When planting upon the lawn or grass plots, remove the sod for a diameter of 4 or 5 feet, and keep this space well worked and free from weeds. Dig the hole deeper and larger than is necessary to admit all the roots in their natural position, keeping the surface and subsoil separate. Cut off broken and bruised roots and shorten the tops to half a dozen good buds, except for Fall planting, when it is better to defer top pruning until the following Spring. If not prepared to plant when your stock arrives, "heel in," by digging a trench deep enough to admit all the roots and setting the trees therein as they can stand, carefully

packing the earth about the roots, taking up when required. Never leave the roots exposed to the sun and air, and "puddle" before planting.



## Planting.

Fill up the hole with surface soil, so that the tree will stand about as it did when in the nursery after the earth has settled, except Dwarf pears, which should be planted deep enough to cover the quince stock upon which they are budded, 2 or 3 inches. Work the soil thoroughly among the roots, and when well covered tramp firmly. Set the tree firm as a post, but leave the surface filling (of poorer soil) light and loose. No staking will be required, except with very tall trees. Never let manure come in contact with the roots.

## Mulching.

A covering of coarse manure, straw, marsh hay, or loose chip dirt, during the first season, will effectually prevent injury from drought, and is a benefit at all times.

## How to Winter Trees Procured in the Fall.

The practice of procuring supplies of trees in the Fall is becoming more and more general as each season demonstrates its wisdom. To insure success you have only to get the trees before freezing weather, and bury them in the following manner: Choose a dry spot where no water will stand during the Winter, with no grass near to invite mice. Dig a trench, throwing out enough dirt to admit one layer of roots below the surface, and place the trees in it, inclined to an angle of 45 degrees or more. Widen the trench, throwing the soil among the roots in position; place another layer in the trench, reclining the tops on the others, and so on until all are in the trench; then finish by throwing up more soil until the tops of the trees are nearly or quite covered. It is also well to bank up the earth around the sides to insure more thorough protection. The exposed tops should then be covered with pine boughs, which insures them against any possibility of injury. Care should be taken to fill solid all the interstices among the roots. In the Spring the roots will be found to have formed the granulation necessary to the production of new spongioles, and when planted at the proper time will start to immediate growth.

## Pruning.

I use the greatest care in digging and packing, but the loss of some small roots and fibres are unavoidable, and to preserve the natural balance between roots and tops, a proper and judicious pruning is in most cases absolutely necessary. All broken or bruised roots should be cut off with a sharp knife, as a smooth cut heals much sooner than a bruise. The tops of Fruit Trees should be cut back to the extent of one half the growth of the previous season, taking care to prune in such a manner as to secure a head properly shaped and sufficiently open to the sun and air. Evergreens and other Ornamental Trees, the beauty of which depends on preserving their natural form, should be pruned but little. Hence great pains should be taken in planting and caring for them.

## Plant Young Trees.

We cannot too strongly recommend to our customers the procuring of young trees, especially for orchard planting, instead of selecting the largest that can be had, to secure more immediate effect. They can be taken up with more perfect roots, and will become sooner established in a new location. They can also be more readily trained to any desired shape. The largest and most successful planters invariably select young, thrifty trees, as the surest in the end to give thorough satisfaction. For small grounds, or street planting, when it is necessary to make a show as soon as possible, large trees are often desirable, and when handled with care should not fail to do well, but with the general planter the average of loss will be much less, and both time and money will be saved if young trees are selected to commence with.



## Distances for Planting.

|                                                        |                                               |
|--------------------------------------------------------|-----------------------------------------------|
| Standard Apples .....                                  | 30 to 40 feet apart each way                  |
| Standard Pears and strong growing Cherries.....        | 20      "      "                              |
| Duke and Morello Cherries .....                        | 16      "      "                              |
| Standard Plums, Apricots, Peaches, and Nectarines..... | 14 to 16      "      "                        |
| Dwarf Pears .....                                      | 10 to 12      "      "                        |
| Grapes.....                                            | rows 9 to 12 feet apart 7 to 12 feet in rows. |
| Currants and Gooseberries.....                         | 4 to 5 feet apart each way                    |
| Raspberries and Blackberries.....                      | 3 to 4 by 5 to 7 feet apart                   |
| Strawberries, for field culture.....                   | 1 to 1½ by 3 to 4 feet apart                  |
| Strawberries, for garden culture .....                 | 1 to 2 feet apart.                            |

NOTE—A most excellent way in planting an apple orchard 30 feet apart is to plant peaches or plums in between. By the time the apples require the ground the peaches will have passed their prime and can be removed.

## Number of Trees to an Acre.

|                              |     |                             |      |
|------------------------------|-----|-----------------------------|------|
| 30 feet apart each way ..... | 48  | 10 feet apart each way..... | 435  |
| 25      "      " .....       | 70  | 8      "      " .....       | 680  |
| 20      "      " .....       | 110 | 6      "      " .....       | 1210 |
| 18      "      " .....       | 135 | 5      "      " .....       | 1742 |
| 15      "      " .....       | 205 | 4      "      " .....       | 2723 |
| 12      "      " .....       | 300 | 3      "      " .....       | 5840 |

RULE—Multiply the distance in feet between the rows by the distance the plants are apart in the rows and the product will be the number of square feet for each plant or hill ; which, divided into the number of feet in an acre (43,560) will give the number of trees to an acre.





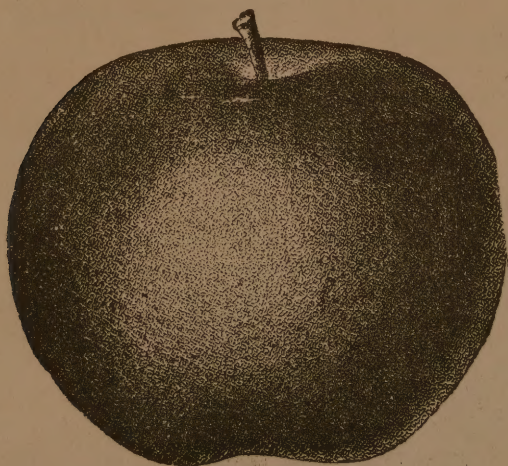
# Fruit Department.



## APPLES.

**T**HE FIRST FRUIT, both in importance and general culture, is the Apple. Its period, unlike that of other fruits, extends nearly or quite through the year. By planting judicious selections of Summer, Autumn and Winter sorts, a constant succession can be easily obtained of this indispensable fruit for family use.

There is no farm crop which, on the average, will produce one-fourth as much income per acre as will a good apple orchard.



**Fameuse or Snow Apple.**

We have, in very large sections of Canada, the soil and climate to produce the best apples in the world—hard, sound, high-colored apples, that bring the highest prices in every market.

The British and other European markets are demanding increased quantities every year. If we give our orchards care and produce the best fruit we can, we have the lead in their markets. Many became discouraged because in 1897 the enormous crop of America did not realize a profitable figure. The reason was two-fold. First—The crop was uniformly very heavy all over America, a thing which very seldom happens—for I do not remember a year before when some

large apple section did not have a light crop—but in 1897 it was heavy all over the great apple belt. Secondly—The facilities for ocean carriage were, and have always been, wretched. If we had had proper, safe ocean carriage in the past, a trade would have been developed that would have taken every barrel of first-class Winter apples that America had to spare in 1897, at a price that would have netted the grower a highly remunerative figure.



This matter of proper steamship carriage however must soon be righted. Unless the steamship people offer safe transport, the Dominion government will be compelled, by the force of public pressure, to take such steps as will insure it, for our apples can be carried to Europe as safe and sound as to Manitoba—where there's a will there's a way. We can grow the best apples in the world. Europe wants them. It cannot be long before means will be provided to get them across the Atlantic—sound.

Besides the European market, each year our own rapidly expanding population in Manitoba and Northern Canada requires more of our fruit. About every third year, the Western States want all our Northern Spies and Greenings, and other good apples. I fully believe there is to-day no agricultural outlook more promising than apple orcharding. Unlike other fruits, our hard Winter apples can, with any decent care, be sent almost as far as grain to distant countries. Unlike grain, however, no other country can grow such apples as we can.

Where many have failed to make apple growing profitable is in lack of proper care. Some have attempted to grow grain or hay under the trees. This is too much for the land, the moisture is extracted as well as the fertility by the crop, and the trees grow but slowly and the apples are small. Many do not spray at all, and some who spray only half do the job. It has been clearly demonstrated that Codling Moth and Scab, the two chief and almost only serious troubles of the apple orchard, can be completely destroyed by thorough spraying. Many have failed by planting upon unsuitable soil. The soil should be well drained, either naturally or artificially. Many orchards have turned out worthless sorts, the trees being purchased from some jobber or dealer, or foreigner—who had neither name nor reputation at stake. The rearing of an apple orchard is too costly an operation, and a full-grown apple orchard is too valuable an asset, to risk the loss of it for a few dollars saved in buying cheap trees from an irresponsible person or firm. Better by far to pay double the price and get the trees from a responsible Canadian grower not dealer.

Another fruitful source of loss has been the planting of black-hearted trees, grown on the North of Lake Ontario. Sound apple trees can only be grown in the peach belt. A young apple tree is tender, and when frozen is overgrown by the new growth, leaving a black and frozen heart.

In every apple growing section there should be evaporators to use up the second-class fruit. A remunerative market can be found for the product.

In all sections where peaches or plums succeed, an excellent plan in planting an apple orchard is to set a peach or plum tree alternately, also an alternate row. These bear ten to fifteen crops before the apple trees require all the ground, and by that time have passed their prime and can be taken out. It costs no more to cultivate the ground, or at any rate only a trifle more; an apple orchard should be cultivated permanently, with very few exceptions. When young, any field crop can be grown between the rows, but the ground for at least two feet beyond the spread of the limbs should always be cultivated clean and never be asked to support any other crop except the apple tree.

I have been speaking largely of commercial apple growing, but aside from that, on every farm in this fair Canada, where apple trees thrive, there should be at least an acre set for an abundant family supply. We now have varieties of merit suitable for all sections where the mercury does not drop below 45° below zero Fahrenheit, and some that will stand even more cold than that.





## KEY TO DESCRIPTIONS OF APPLES

As to hardness—all apples described in this catalogue will stand, under ordinary care, 25° below zero without injury. Those classed as **HARDY** will endure about ten degrees more of cold, and those classed as **VERY HARDY** will endure from 35 to 45° below zero Fahrenheit without injury so far as tested, and are suitable for the more Northern sections of Ontario and the greater part of Quebec, and colder parts of New Brunswick. I may say, however, that this is subject to correction, as this matter of hardness is by no means fully tested, and no one can definitely pronounce upon every variety. The latitude in which each variety will thrive is only approximate. Many of those classed as hardy may endure much more than 35° below zero.

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### SUMMER VARIETIES.

**ASTRACHAN RED**—Large, roundish, nearly covered with deep crimson, overspread with a thick bloom; juicy, rich, acid, and a good bearer; a handsome apple, that with cold storage facilities for placing on the British market is likely to prove very profitable. Tree hardy. Season immediately following Early Harvest.

**BENONI**—Medium size, roundish oblong, red flesh tender, juicy, rich; good eating apple, productive, tree moderate grower. August.

**CHARLOTTENTHALER**—Very similar to Yellow Transparent, very hardy, tree a stronger grower; fruit slightly larger, as it does not bear quite so excessively heavy as Transparent, but quite heavy enough—perhaps on the whole slightly to be preferred even to that valuable apple on that account.

**EARLY HARVEST**—Medium size, round, straw color; tender, sub-acid and fine; productive. One of the very earliest.

**EARLY STRAWBERRY**—Medium size, mostly covered with deep red; tender flesh, agreeable melting flavor; good bearer. Season, end of August.

**GOLDEN WHITE**—Tree very hardy, inclined to spread, bears young and a good cropper, fruit above medium, oblate; in color, greenish yellow, with red on sunny side; mild sub-acid, good for table and cooking. Season, Sept.

**GOLDEN SWEET**—Large, yellow; tree strong grower and productive. Season, end of August. Another good apple for the boys.

**GYPSY GIRL**—A very large dark red apple, of Russian origin, following Duchess in date of ripening, and of very fair quality. A very handsome apple and well worth planting when a very hardy tree is required.

**LIVELAND RASPBERRY**—Tree very hardy, inclined to upright, but spreading with age. Fruit medium, roundish, conic; in color, yellow green, often covered with red, dashed with spots, or mottled; flesh white, often streaked with red, juicy, with scarcely any acidity, quality excellent. A good dessert fruit. Season, August to October.



**MONTREAL PEACH**—An extra fine late Summer apple of large size, pale straw color with a fine salmon rose cheek; texture of flesh and flavor are all that can be desired in a first-rate apple. The tree is very hardy, vigorous and free from blight.

**POINTED PIPKA**—Tree upright, stocky, very hardy, a good bearer. Fruit above medium, conical; in color a waxy yellow, splashed with red, attractive; flesh soft, juicy, sub-acid, of good quality. A first-class basket fruit. Season, August to September 10th.

**SWEET BOUGH**—Large; pale greenish yellow; tender and sweet. Strong grower and good bearer. Every family should have one or two. The fruit will disappear as if by magic, as fast as ripe, as it is so good to eat out of the hand. The boys will soon find the Sweet Bough tree. August.

**TETOFISKY**—Bears extremely early, usually the second year after transplanting, and bears every year; very hardy; fruit yellow, beautifully striped with red, only medium size and quality. July and August.

**TITOVKA** (from Riga, Russia)—A very hardy tree, bearing abundant crops of very large, handsome red colored apples, of good quality and ripening in the late Summer or early Fall. One of the most desirable very hardy apples of its season. Tree a free grower and very productive.

**YELLOW TRANSPARENT** (Russian Transparent)—A very early Russian apple, of good quality and decided merits; size medium; color when ripe, pale yellow with pink cheek—extremely handsome; sprightly, sub-acid; great bearer, often bearing fruit in the nursery rows; very hardy, one of the best early apples for the North, and no doubt a very profitable fruit to plant in an early location for home market. July.

## AUTUMN VARIETIES.

**ARABSKOE**—Russian origin, large, roundish, inclining to conical; greenish yellow ground mostly covered with purplish red; flesh white, sub-acid; foliage very large with long stalks. Very hardy. Season, October and November.

**ALEXANDER** (Emperor)—Of Russian origin. Very large; deep red or crimson; flesh yellowish white, crisp, tender with pleasant flavor; not a very heavy bearer. Very hardy. October.

**BEITIGHEIMER**—A valuable German variety, very large, roundish conical, pale cream ground neatly covered with purplish crimson, flesh white, firm and sub-acid, quality hardly medium, abundant bearer; hardy, productive and valuable. Early Fall.

**CHENANGO** (Sherwood's Favorite)—Medium to large; color, yellow ground overspread with red on the sunny side; shape, oblong conical. Highly valuable as a table apple. Season, September.

**COLVERT**—A very large, somewhat coarse apple of greenish yellow color; very productive, tree very vigorous. Season, October.

**FALL PIPPIN**—Very large, yellow; tender, juicy and rich; fine in all localities. One of the best Fall apples, especially for cooking. October to December.



- GRAVENSTEIN**—Large, striped and beautiful; tender, juicy and highly flavored; productive. Owing to quality and handsome appearance brings top price on the British market, when it arrives sound. September and October.
- GOLDEN WHITE**—A large, showy apple; ripe in early October. Tree very hardy. Origin, Russia.
- HAAS (Gros Pommier, Fall Queen)**—Medium to large, slightly conical and somewhat ribbed; pale greenish yellow, shaded and striped with red; very thrifty grower and hardy. October and November.
- JERSEY SWEET**—Medium size; yellow, striped with red; quality good. A table and cooking apple of merit in its season. A good grower and bearer. Latter part of September and October.
- MAIDEN'S BLUSH**—Good medium size, oblate, smooth, regular, with a fine, evenly shaded red cheek or blush on a clear, pale yellow ground; flesh white, tender, sprightly, with a pleasant sub-acid flavor; bears large crops. A very profitable apple for a fancy trade. September and October.
- MUNSON**—A sweet apple of medium size, yellow with red cheek, quality medium. Season, October and November.
- OLDENBURG (Duchess of Oldenburg)**—Russian, medium to large size; skin yellow, streaked with red and somewhat blushed, sometimes with a faint blue bloom; flesh juicy and good, with a rich, sub-acid flavor; productive and very hardy. A most profitable variety to plant. End of August and first of September.
- PUMPKIN SWEET (Pound Sweet)**—A very large yellowish russet apple of medium quality, tree vigorous. Season, October and November.
- ROMNA**—Hardy as the hardiest crab, fruit large; cooks well, sharp acid flavor; very productive.
- RIBSTON PIPPIN**—An extra fine Fall apple, large in size, excellent in quality; color, dull red on yellow ground; both a good dessert and good cooking apple. A heavy loader and one of the very best and most profitable late Fall or early Winter apples, especially for the great apple districts of Ontario and Nova Scotia.
- ST. LAWRENCE**—Large, yellowish, streaked and splashed with carmine; flesh white, lightly stained, crisp, juicy, tender and vinous; tree hardy and productive, and one of the best for northern sections, may perhaps be safely classed as very hardy. September and October.
- SWITZER**—A handsome, round apple, red color on white ground, of medium size, mild flavor, fair quality. Ripe last of September and October. Tree very hardy. Origin, Russia.
- TWENTY OUNCE**—Very large, nearly round; yellow, striped with red; quality good; good bearer, but is too easily blown off with the wind. November and December.
- TITOVKA**—A very hardy apple of Russian origin; color, yellowish ground striped with red, when fully ripe and properly colored—very handsome, the red turning to nearly purple with a light bloom; flesh rather coarse, size very large. Very productive and valuable for market, especially in the very cold sections of Canada. Distinct from Riga Titovka.
- WOLFE RIVER**—A very large, handsome apple, resembling Alexander very much; quality medium, very hardy and vigorous grower. Season, November and December. Originated in Wisconsin. One of the most valuable Fall apples for the cold North, on account of large size and handsome appearance.



## WINTER VARIETIES.

- AMERICAN GOLDEN RUSSET**—Medium in size, roundish, ovate; clear golden russet; very tender, juicy, rich; more resembles in texture a buttery pear than an apple; good bearer and hardy. February to May.
- BALDWIN**—Large, roundish; deep bright red; juicy, crisp, sub-acid, good flavor; very productive of fair, handsome fruit; one of the best and most popular Winter apples. January to April.
- BEN DAVIS** (New York Pippin, Kentucky Streak, Etc.)—Large, handsome, striped, of fair quality only; productive; a late keeper; highly esteemed as a shipping apple; hardy. February to May.
- BELLE DE BOSKOOP**—Large, bright yellow, washed with light red on sunny side, and sometimes with a sprinkling of russet, flesh crisp, firm, juicy, sprightly, sub-acid; quality very good; a late keeper. Tree a vigorous grower and hardy.
- BOTTLE GREENING**—Resembling Rhode Island Greening, but tree a better grower and much hardier. A native of Vermont. December to March.
- BAILEY SWEET**—Large, deep red; tender, rich, sweet. Vigorous, upright, good bearer. November to April.
- BETHEL**—Large, deep red, flesh crisp and tender. Tree very hardy and highly prized in Vermont, where it originated.
- CRANBERRY PIPPIN**—A strikingly beautiful apple, and excellent for cooking; large size, smooth, light yellow, with bright scarlet cheek; juicy, sub-acid. November to February.
- CANADA BALDWIN**—Very hardy tree, fruit rather under medium size, good red color, very productive, does especially well on clay loam. Regarded as one of the best in the Eastern Townships of Quebec.
- COOPER'S MARKET**—Medium size, oblate conical, yellow ground with red streaks, handsome when well grown; mild flavor, quality hardly medium, very productive and a very late keeper, on account of which it is in considerable demand. Tree hardy, but a slender grower.
- ENGLISH RUSSET**—Fruit medium size, very regular, slightly conical; pale greenish yellow, about two-thirds covered with russet; flesh yellowish white, firm and crisp, with pleasant, slightly sub-acid flavor, hardy to very hardy. January to May.
- FAMEUSE** (Snow apple)—Medium size, roundish, very handsome; deep crimson; flesh snowy white, tender, juicy, high flavored and delicious. Tree vigorous, productive and very hardy. No more profitable apple for export in cold storage; must be thoroughly sprayed to prevent scab. November to February.
- FALLAWATER** (Fornwalder, Tulpehocken)—Very large, globular; yellowish green, dull red cheek; quality hardly medium. Tree a strong grower, very productive, even while young. Ships well and sells well. November to March.
- GRIMES' GOLDEN** (Grimes' Golden Pippin)—An apple of the highest quality, medium size; yellow; productive; tree rather slow grower. January to April.



- GIDEON**—Raised in Minnesota from Crab seed by Mr. Gideon. An upright vigorous grower ; medium size ; color yellow, with vermilion blush on sunny side. Flavor, acid ; quality medium ; very hardy, productive. November to January.
- GANO**—Originated in Missouri. Form conical, good size and smooth ; deep red, shaded on sunny side to mahogany, very attractive ; flesh pale yellow, fine grained, pleasant, mild, sub-acid ; is a good shipper and keeper ; tree healthy, vigorous and hardy. An annual and prolific bearer ; quality only fair, like Ben Davis. February to May.
- HUBBARDSON NONSUCH**—Large, striped yellow and red, round ovate in form ; tender, juicy and fine ; good bearer ; an excellent apple indeed ; hardy, and ought to be planted much more extensively than it is. November to May.
- JONATHAN**—Medium size, round conical, red and yellow in color, mild flavor ; high quality, ranking among the best in this respect, both for table and cooking purposes ; very productive ; shoots light colored, slender and spreading. November to March.
- KING (Tompkins County)**—Very large and handsome ; red, striped with yellow ; not very productive. One of the very best apples grown, brings a higher price than any other Canadian apple on the British market, on account of high quality, large size and handsome appearance. November to March.
- LAWVER (Delaware Red)**—Medium to large ; bright red, highly colored ; flesh fine grained ; crisp, juicy, sub-acid, excellent ; remarkable for its long keeping qualities, and an early and abundant bearer. Very hardy and very desirable for Northern Ontario, Quebec and New Brunswick—apples of this variety have been kept for eighteen months in a good cellar at Ottawa.
- LONGFIELD**—A Russian variety imported some years since. Tree a free grower, early and abundant bearer ; very hardy ; medium to large ; yellowish green, thickly covered with red stripes, a decided blush on sunny side ; rich, sprightly, sub-acid, very good. November to February.
- LA RUE (Baxter or Red Pound)**—A magnificent very large apple, which originated on the banks of the St. Lawrence ; dark red, quality fair, tree very hardy and productive, should occupy a high place on any list of apples for the North ; a strong, vigorous, upright grower. November to February.
- LADY APPLE**—A beautiful little dessert fruit ; flat, pale yellow, with a deep red cheek ; juicy, rich and pleasant. November to May.
- MANN**—An upright grower, forming a round head ; fruit medium to large, roundish, oblate ; skin deep yellow when fully ripe, with sometimes a shade of brownish red where exposed ; flesh, yellowish, juicy, mild, pleasant, sub-acid ; good to very good. Will keep as long as Roxbury Russet. Tree hardy and productive. May to June.
- MCINTOSH RED**—Originated in Ontario, also on the banks of the St. Lawrence. Tree very hardy, long lived ; good annual bearer of fair, handsome fruit of excellent quality, for home or market use. Fruit above medium, roundish, oblate ; skin whitish yellow, very nearly covered with dark rich red or crimson, almost purplish in the sun. Flesh white, fine, very tender, juicy, mild, sub-acid. I know of no apple more uniformly profitable in the North for Montreal market, and it will certainly take a front place wherever a beautiful dessert apple of high quality is wanted. November to February.
- McMAHAN'S WHITE**—A very large apple, almost white ; tart, excellent for cooking ; an annual moderate bearer. Tree very hardy and a vigorous grower. Season, January to February.

**MAGOG RED STREAK**—Origin, Vermont. Bears annually large crops; valuable for its extreme hardiness, vigor, productiveness and long keeping; fruit medium or nearly so; roundish, inclining to oblong; skin yellow, shaded with light red over half the fruit; flesh yellowish; a little coarse, moderately juicy; mild, sub-acid. December to March.

**NORTHERN SPY**—Very large, roundish, slightly conical, somewhat ribbed; striped, the sunny side nearly covered with purplish red. Flesh white and tender, with a mild sub-acid, rich and delicious. The tree should be kept open by pruning, so as to admit the air and light freely. Perhaps the most valuable apple grown in Canada considering all points; hardy; commences to bear late, but bears very heavy when it starts. January to June.

**NEWTON PIPPIN**—An apple that brings the highest price of any in the British market, on account of high quality and long keeping properties, but it succeeds only in certain districts and on certain soils. It is a feeble growing tree and does not succeed generally in Canada. Color yellow, slightly tinged with red; form round oblate; quality perfection. Season, December to June.

**ONTARIO**—A very large apple, of Canadian origin. Color, greenish yellow ground, largely covered, especially when exposed to the sun, with streaks of red—resembles Northern Spy in general appearance; quality good, keeps well until past midwinter. Is especially valuable on account of very early bearing; also being very productive. Tree moderate upright grower.

**PECK'S PLEASANT**—Large; pale yellow, with red cheek; very smooth and fair; flesh firm and rich, approaching the flavor of a Newton Pippin. Keeps well. Tree a moderate, erect grower and good bearer. November to April.

**PEWAUKEE**—A seedling from Duchess of Oldenburg. Fruit medium to large, oblate, waved; surface bright yellow, partially covered with dull red, striped and splashed, covered with a gray bloom and overspread with whitish dots; flesh yellowish white, breaking juicy; flavor, sub-acid; quality fair; a tremendous bearer at a very early age, a good shipper and a hardy tree. January to June.

**POMME GRISE**—A rather small and beautiful gray russet apple, with a slight blush next the sun; flesh tender and highly flavored; tree a very poor grower. December to April.

**PRINCESS LOUISE**—Supposed to be an improved Fameuse, in that it is not so liable to Scab, but it is not so handsome. Color is greenish ground with red stripes, sometimes not very distinct, when well exposed somewhat showy, but otherwise not so attractive as many others. Tree hardy, fruit medium size, quality first-rate. Season, November and February.

**RCME BEAUTY**—Large, mostly bright red; tender, juicy, good. Its large size and beautiful appearance render it popular in market. Tree hardy. Season, December to April.

**RED CANADA (Old Nonsuch of Mass., Steel's Red Winter)**—Medium size, oblate conical, red on yellow ground; very productive; hardy and good shipper; quality first-class, a late keeper. January to May.

**RHODE ISLAND GREENING**—Large, greenish yellow; tender, juicy and rich, with rather an acid flavor; an abundant bearer. One of the most profitable apples to plant in the old apple belts. December to April.

**RUSSET, ROXBURY**—Medium to large; greenish or yellow russet; crisp, good, sub-acid flavor; productive; very profitable on account of its long keeping qualities; very hardy. January to June.



**ROLFE**—Large size ; color, yellow ground with red stripes ; form oblate, flavor mild, quality good for dessert or cooking, tree hardy and productive.

**SEEK-NO-FURTHER** (Westfield)—Medium to large ; slightly russeted, with dull red stripes ; tender, rich, spicy and fine ; good bearer ; an excellent apple, especially for home use. November to January.

**SPITZENBURG, ESOPUS**—Medium to large, deep red ; flesh yellow, crisp, sub-acid, highly flavored. Bears and grows well transplanted in rich soil. Perhaps the very finest apple for home use in the Winter, but will not thrive except on rich, well drained soil. November to April.

**SUTTON BEAUTY**—A little above medium size ; round oblate, conical ; waxen yellow, striped with crimson ; flesh whitish, tender, juicy, sub-acid ; quality fair to good, long keeper, tree a free grower and very productive. Regarded as a very valuable apple in Western New York.

**SCOTT'S WINTER**—Originated in Vermont. A very hardy tree. Fruit only medium size, round, conical, red striped ; flavor acid, quality very fair ; season late—Winter. Especially suitable for cooking. Especially valuable on rich gravelly clay, and with good cultivation and thinning of fruit, to keep up the size. It is an annual and very heavy bearer.

**STARK**—Valued as a long keeper, a profitable market fruit. Fruit large, roundish, oblate, conical ; skin greenish yellow, shaded and striped with light and dark red nearly over the whole surface, and thickly sprinkled with light brown dots ; flesh yellowish, moderately juicy, mild, sub-acid ; tree hardy and very productive at an early age, tree a strong grower, quality only fair. January to May.

**SHIAWASSE BEAUTY**—Said to be a seedling of Fameuse. Medium ; whitish shaded, marbled, splashed and striped with rich red ; flesh firm and very white, tender, juicy, brisk, refreshing, sub-acid. Tree vigorous, very productive and very hardy, at any rate succeeds well at the Experimental Farm, Ottawa. This apple will be, in my opinion, extremely profitable to plant for a choice dessert fruit, as it is one of the very handsomest apples I have ever seen. October to January.

**SALOME**—Tree a vigorous grower ; equals Wealthy in hardiness ; an early and annual bearer ; fruit of medium and uniform size ; quality very good, which it retains even into Summer ; keeps well with ordinary care until July. Hangs to the tree with unusual tenacity.

**SWAAR**—Large ; pale lemon yellow ; flesh tender, rich and spicy. Requires high culture. November to May.

**TOLLMAN SWEET**—Medium, pale yellow, slightly tinged with red, usually a fine red line runs from blossom to stem ; firm, rich and very sweet, the most valuable baking apple ; productive, hardy. November to April.

**WALBRIDGE**—An early bearing variety, desirable for extreme cold sections, having stood uninjured in Minnesota, where all but most hardy varieties have failed. Fruit medium size, handsome, striped with red ; quality fair ; productive. December to April.

**WEALTHY**—Healthy, very hardy and productive, also bears at a very early age. Fruit medium, oblate ; skin smooth, whitish yellow, shaded with deep red in the sun, splashed and spotted in the shade. Flesh white, fine, tender, juicy, lively, sub-acid, very good. One of the very best all-round apples for the far North or even middle North. December to February.

**WAGNER**—Medium to large ; deep red in the sun ; flesh firm, sub-acid and excellent ; very productive ; bears very young. December to May.

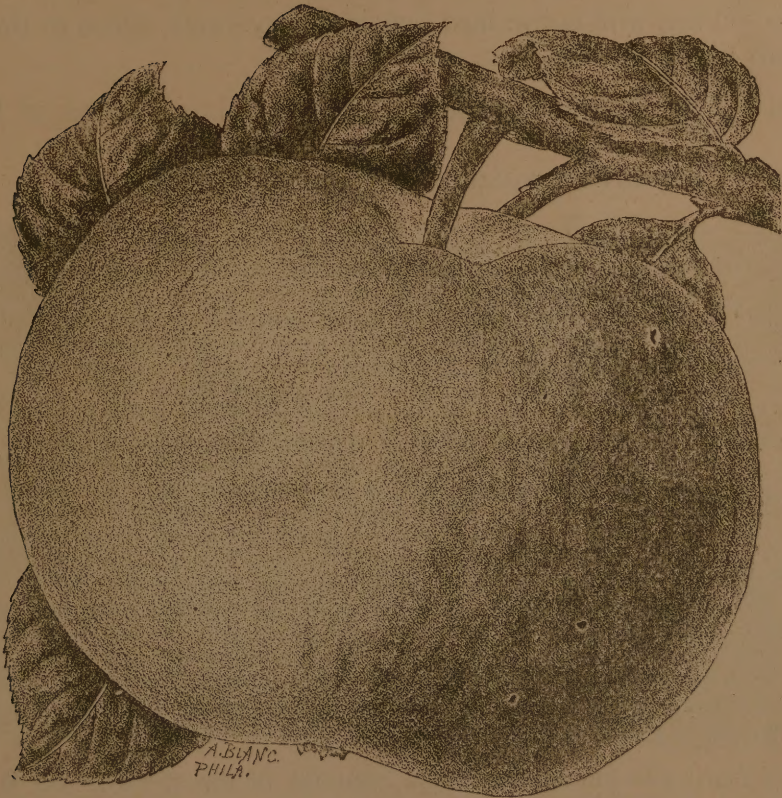


**WINTER ST. LAWRENCE**—A very hardy tree, fruit resembles Fall St. Lawrence, and so is a valuable addition to the list of very hardy Winter apples. It is a good keeper, very productive, and being handsome and of good quality will be in demand in the North.

**WINTER ARABKA**—A Russian, very much in advance of most of the importations from that country. Fruit very large; very handsome red, almost purple; skin smooth and clean, form like Alexander, tree very hardy, productive. A most desirable apple for the cold North. The quality is good, especially for a cooking apple.

**YELLOW BELLEFLEUR**—Large; yellow, with a tinge of red on the sunny side; flesh crisp, juicy, with a sprightly, aromatic flavor; a beautiful and excellent fruit. Valuable for baking. The tree is a free grower and good bearer. November to April.

**YORK IMPERIAL**—Large size, yellow streaked with red, mild sub-acid flavor, quality good. A popular dessert and market fruit in Pennsylvania.





## CRAB APPLES

**A**RE profitable for market, coming into bearing quite early. Some of the varieties are not only good for culinary purposes, but also for table use.

There are several points to which we wish to call attention, and on which we base our recommendations of these hardy fruits :

1ST—They can be planted on almost any kind of soil, and in the most exposed situations, with perfect safety.

2ND—They will stand the severity of the changes of the coldest weather.

3RD—They will come into bearing very early, often in the second year from planting, and bear every year.

4TH—They are very productive, giving large crops of beautiful fruit.

5TH—They are unequalled for cider or vinegar.

6TH—Some of them are pre-eminently dessert fruits, being of superior quality and strikingly handsome.

7TH—They can be dried, cooked, canned or preserved with the skin on, saving a great amount of trouble.

8TH—The size of the fruit varies from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches in diameter, being large enough to quarter and core for drying, etc.

The following are the most valuable varieties :

GEN'L GRANT—Tree a vigorous and upright grower ; fruit large, round, red to very dark red ; flesh white, tender, mild, sub-acid ; excellent for dessert, and one of the best Crabs introduced. October.

HYSLOP—Almost as large as Early Strawberry Apple ; yellow ground with deep crimson cheek ; very popular on account of its large size, beauty and hardness ; flavor acid. October to November.

MONTREAL BEAUTY—One of the most beautiful of the Crabs ; fruit large, bright yellow, shaded with red ; flesh yellowish, firm, acid. Tree a free grower. October to December.

MARTHA—Medium size, yellow with red cheek, flavor acid, quality good. Season medium early. One of the best.

**ORANGE**—Medium size, yellow color, quality fair. Season, October to November.

**TRANSCENDANT**—Tree immensely productive, bearing after second year and producing good crops by the fourth season. Fruit from  $1\frac{1}{2}$  to 2 inches in diameter, being large enough to quarter and core for preserving and drying. Excellent for sauce and pies, both green and dried; the best of its class for cider, being juicy and crisp. Skin yellow, striped with red. September and October.

**VANWYCK**—A seedling which originated in Dutchess County, N. J. Very large and handsome; skin mottled with bright red; flesh white, firm and sweet. Season, August to September. Dessert or cooking.

**WHITNEY'S SEEDLING**—Large, averaging  $1\frac{1}{2}$  to 2 inches in diameter; skin smooth, glossy, green, striped and splashed with carmine; flesh firm and juicy, flavor very pleasant. Ripens latter part of August. Tree a great bearer and very hardy; a vigorous, handsome grower, with a dark green, glossy foliage. August to September.

**YELLOW SIBERIAN**—Medium size, yellow color, quality fair. Season, August to September. Kitchen and market.





# PEARS.



**T**HE cultivation of this noble fruit is extending, as it is found it can be shipped to Britain with profit and success. The range of varieties is such that, like apples, they can be had in good eating condition from August until early Spring.

The Pear, like most things highly desirable and valuable, cannot be had without attention, labor and skill.

One of the most important points in the management of Pears, is to gather them at the proper time.

Summer Pears should be gathered at least ten days before they are ripe, and Autumn Pears at least a fortnight. Winter varieties, if they will hang so long, may be left until the leaves begin to fall.

At the present time the demand is for choice fruit, and it should have the best kind of cultivation; the fruit should be thinned so as not to over-produce. Care should be used in selecting for market only the best specimens and with such effort and system on the part of the grower, that they will yield a satisfactory profit.

The Pear succeeds on most soils, but does best on a rather heavy loam. Budded on its own stock, it makes a standard tree, and on the French or Angers Quince, a dwarf, the former being best adapted to large permanent orchards, the latter for yards and gardens.

Dwarfs must always be planted sufficiently deep to cover the junction of the Pear and Quince two or three inches—the soil made rich and well tilled, and about one-half of the previous Summer's growth cut off each Spring. Under this treatment, Dwarfs are everywhere successful. The side branches should not be removed higher than one foot from the ground in Dwarfs, while Standards may be trimmed to the height desired, although the best planters are now not trimming branches from the trunks, but allowing them to grow in order to shade the trunk as much as possible. Train in pyramidal form. Ripen the fruit in the house. Gather when, on gently lifting the fruit, the stem will readily separate from the limb. Place in a dark room until fully matured. Winter pears may hang on the trees until there is danger from frost, then place in a dry cellar for maturing.

On deep rich soil, which is most suitable for Dwarf trees, an excellent plan is to plant Standard trees twenty feet apart each way, then plant a Dwarf midway between and a row of Dwarfs midway between each row of Standards. Dwarfs bear heavily at an early age, and have passed their usefulness by the time the Standards require the room.

The letters "D" and "S" appended to the description of varieties indicate favorable growth, either as "Dwarfs or "Standards," or both. Those designated as "moderate growers" are usually smaller trees.





## SUMMER VARIETIES.

- BARTLETT**—Large size, with often a beautiful blush next the sun ; buttery, very juicy and highly flavored ; bears early and abundantly ; very popular. Taking all points into consideration, by far the most valuable pear ever introduced. D. and S. August and September.
- BEURRE GIFFARD**—An excellent variety ; medium size ; greenish yellow, red in the sun ; very early ; very productive moderate grower. D. and S. Early August, before Bartlett.
- BESSIMIANKA**—Medium size ; color yellow ; granular, juicy, sweet, quality only medium. Origin Russia. Counted among the most hardy.
- CHAMBER'S EARLY**—Very early, smallish pear ; granular, firm, sweet, of medium quality. Dessert.
- CLAPP'S FAVORITE**—Very large ; yellowish green to full yellow when ripe, marbled with dull red in the sun, and covered with small russet specks, vinous, melting and rich. Very productive, being an exceedingly vigorous grower—it succeeds well on the very hardest clay. It has one fault as a shipper, it rots at the core first. D. and S. August.
- LAWSON, OR COMET**—The tree is a vigorous grower ; productive, bearing young and early in the season ; foliage clean and healthy ; yellow, flushed with the most beautiful crimson ; flesh crisp and juicy ; a firm, good shipper, and a saleable and valuable market variety. Early August, before Beurre Giffard. D. and S.
- MANNING'S ELIZABETH**—Small to medium ; bears in clusters ; crimson and gold color ; very beautiful, melting, rich, sugary, sprightly, perfumed flavor ; very productive. August. S.
- OSBAND'S SUMMER**—Small to medium, yellow with red cheek ; half melting, mild and pleasant ; fine flavor and excellent ; productive. D. and S. August.
- ROSTIEZER**—Small to medium, yellowish green, with a brown cheek ; flesh juicy, sweet and excellent. S. September.
- SOUVENIR DU CONGRESS**—Fruit large to very large, resembling in form the Bartlett ; skin smooth, of a handsome yellow at maturity, washed with bright red or carmine on the side exposed to the sun. Flesh much like the Bartlett, having the musky flavor, though in a less degree. S. September.
- TYSON**—Medium size, bright yellow, cheek shaded with reddish brown, buttery, very melting ; flavor nearly sweet, aromatic, excellent ; very productive. S. Sept.
- WILDER**—Originated in Ohio. Tree a vigorous grower, rather small. Yellow, with a red cheek, fine quality ; ripens very early, not inclined to rot at the core. Moderate grower, ripens earlier than Lawson. D. and S.

## AUTUMN VARIETIES.

- BEURRE CLAIRGEAU**—Very large ; skin yellow, inclined to fawn, shaded with orange and green, covered with russet dots ; flesh yellow, somewhat granular, with a slightly perfumed, vinous flavor ; quality coarse. D. and S. October and November.
- BEURRE BOSC**—A large, fine pear, russetty yellow, slightly brownish red in the sun ; flesh white, melting, juicy, sweet, perfumed ; productive. S. Sept. and Oct.
- BEURRE D'ANJOU**—Very large, greenish, sprinkled with russet, sometimes shaded with dull crimson ; flesh whitish, buttery, melting, with a high, rich, vinous, excellent flavor ; very productive ; succeeds well on the quince ; should be in every orchard. Will stand near the head of the list for export to Britain. D. and S. October to January.
- BOUSSOCK (Doyenne Boussock)**—A large pear of good quality, resembling the White Doyenne. Tree a very vigorous, rapid grower and abundant bearer. This variety is far from being appreciated. We can recommend it as a valuable market and export pear. September.
- BUFFUM**—Medium size, yellow, somewhat covered with reddish brown and russet ; buttery, sweet and excellent. D. and S. September and October.
- DEIL (Beurre)**—Large size ; yellow, russety ; granular, buttery, sweet vinous flavor ; quality medium. A useful dessert pear.
- DUCHESS D'ANGOULEME**—Very large, dull greenish yellow, streaked and spotted with russet ; flesh white, texture rather granular, with a rich and very excellent flavor, however on young standard trees the fruit is variable, but as a dwarf this variety is always fine, in fact is planted as a dwarf more extensively than all other sorts combined and will be very valuable for export. D. and S. October and November.
- FREDERICK CLAPP, OR CLAPP'S NO. 22**—A very fine pear. Tree a vigorous grower. Fruit medium to large, roundish ; skin smooth, bright yellow ; flesh whitish yellow, fine, very juicy, melting, rich, highly vinous and slightly aromatic. Ripens from middle to last October. S.
- FLEMISH BEAUTY**—Large, beautiful, juicy, melting, rich and fine ; very heavy bearer ; hardy everywhere. D. and S. September and October.
- GOODALE**—Originated in Saco, Maine. Fruit large, flesh white, juicy, melting, of excellent flavor and quality. Tree hardy and upright in growth, and uniformly productive ; valuable. S. October.
- HOWELL**—Large, light, waxen yellow, with a fine red cheek ; handsome, rich, sweet, melting, perfumed, aromatic flavor. An early and profuse bearer. Very hardy and valuable. Will be one of the best for export. D. and S. September and October.
- HARDY BEURRE**—A large pear ; cinnamon russet shaded red ; melting, buttery, juicy and vinous. One of the best Autumn pears.



**IDAHO**—Size very large, form nearly round, resembling Easter Beurre ; skin greenish yellow, brownish red on sunny side, with a surface like that of Duchess ; flesh melting, juicy, slightly vinous, quality fair. Season of maturity October. D. and S.

**KIEFFER'S HYBRID**—Raised from seed of the Chinese Sand Pear, accidentally crossed with the Bartlett or some other kind grown near it. Tree has large, dark green, glossy leaves, and is of itself very ornamental ; is an early and very prolific bearer. The fruit is wonderfully showy and valuable for market, but not good for table use. Can ship it to Britain without cold storage. It never rots at the core and is nearest blight proof of any pear. D. and S. November to December.

**LOUISE BONNE DE JERSEY**—Rather large, greenish yellow, with a bright red cheek ; juicy, buttery and melting, excellent ; very productive. This pear stands decidedly at the head of the list of pears either as Standard or Dwarf—a large productive pear of the very highest quality—and will be in great demand either for home and foreign markets, and commands the very highest price. D. and S. September and October.

**LUCRATIVE**—Medium size ; melting, sweet ; bears early and abundantly ; tree a free, upright grower.

**SUPERFINE BEURRE**—Medium to large size ; yellow ground overlaid with crimson russet ; quality fine, juicy, melting, and vinous. A most excellent pear either for dessert or market.

**SWAN'S ORANGE (Onondago)**—A very large, melting, sprightly, vinous Pear. Tree vigorous, hardy and extremely productive. Another excellent sort for export. October and November. S.

**SHELDON**—Medium size ; yellow on greenish russet, with a richly shaded cheek ; flesh melting, juicy, with a very brisk, vinous, highly perfumed flavor ; productive. A choice pear for home use or market. S. October.

**SECKEL**—Small ; skin rich yellowish brown when fully ripe, with deep brownish red cheek ; flesh very fine grained, sweet, exceedingly juicy, melting, buttery ; the richest and highest flavored pear known. D. and S. September and October.

**VERMONT BEAUTY**—A beautiful new seedling pear that originated in Northern Vermont. Fruit of medium size ; flesh melting, sprightly, and of the best quality ; tree healthy, hardy and very productive. October. S. and D.

## WINTER VARIETIES.

**DANA'S HOVEY**—Small, yellow russety pear, of fine quality ; keeps well.

**EASTER BEURRE**—A large, roundish oval fruit, yellow, with a red cheek ; melting and rich. Tree a moderate grower and most abundant bearer ; best on the quince as a dwarf. Keeps all Winter. D. and S.

**JOSEPHINE DE MALINES**—Medium, yellow, slightly russet ; flesh buttery, juicy, and sweet ; a fine keeper ; productive and very hardy. December to March. D. and S.

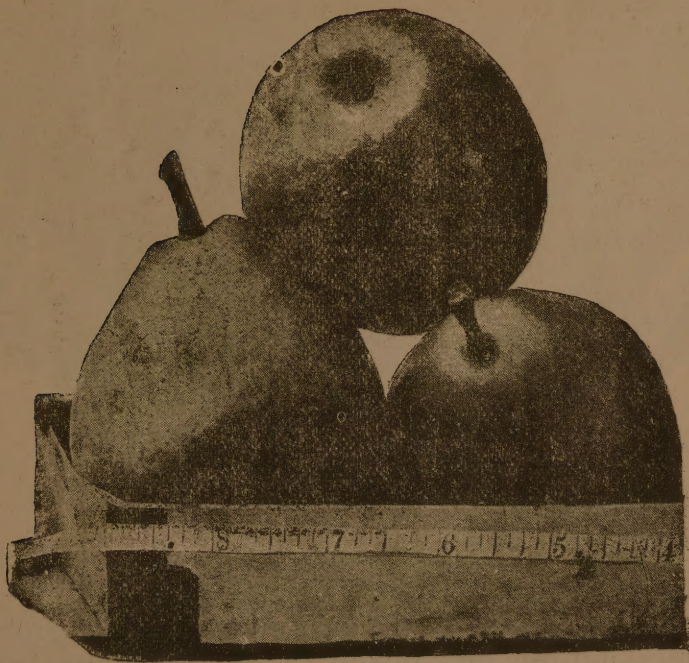
**LAWRENCE**—Medium size, yellow, covered with brown dots ; flesh whitish, slightly granular, somewhat buttery, with a very rich aromatic flavor, unsurpassed among the early winter pears ; succeeds well on the quince ; ripens with little care ; should be in every orchard ; tree healthy, hardy and productive. November and December. D. and S.

**MT. VERNON**—Medium size, light russet, reddish in the sun ; flesh yellowish, juicy and aromatic, early bearer. A very good late pear. December. D. and S.

**PRESIDENT DROUARD**—A variety recently introduced from France, highly recommended for its rich flavor and great keeping qualities. Tree a vigorous grower. Fruit large and handsome ; melting and juicy, with a delicious perfume. March to May. S.

**VICAR (Le Oure)**—Large, long ; not first quality but desirable for its productiveness. Best on quince. November to January. D. and S.

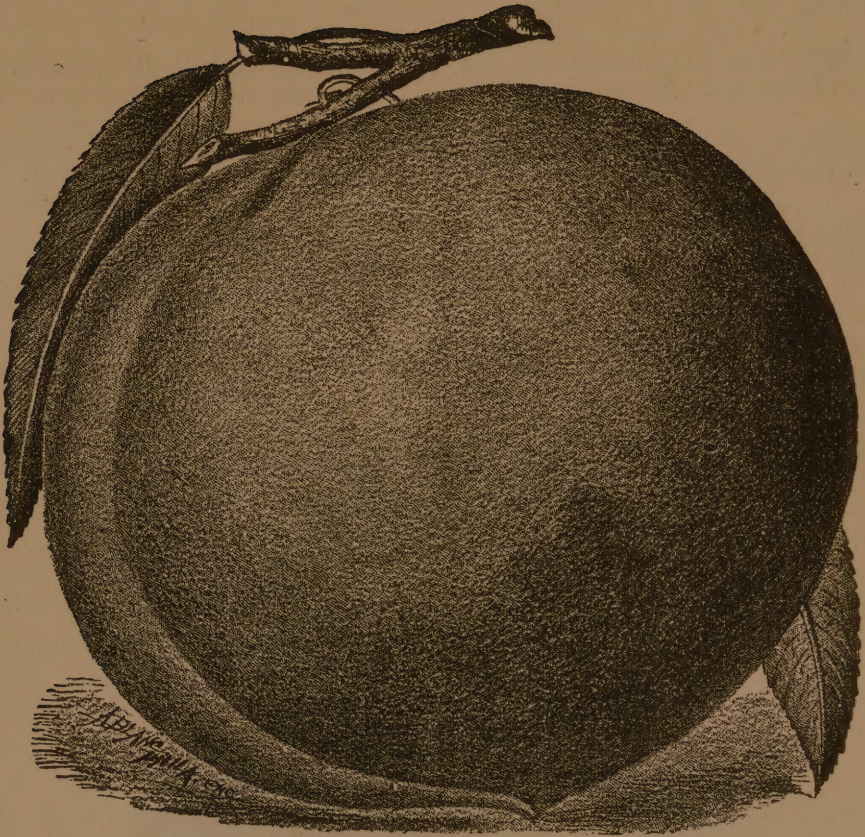
**WINTER NELIS**—Medium size, yellowish green and russet ; fine grained, melting, rich and delicious ; one of the best winter pears, very productive. December. S.



ANJOU.



# PEACHES.



**T**HE PEACH TREE requires a well-drained, moderately rich soil—a warm, sandy loam is probably the best. In order to preserve the continued healthy growth of the trees and the fine quality of the fruit, the trees should have the shoots and branches shortened every year, so as to preserve a round, vigorous head with plenty of young wood ; and the land should not be seeded to grass, but kept in constant cultivation and highly fertilized.

Peach trees should be set 12 to 18 feet apart each way, according to soil and method of pruning. On heavy soil and with trees regularly shortened in, 12 feet apart will do ; whereas on deep, moist, rich sandy loam, well underdrained—which is model peach soil—18 feet each way is not too far, especially if branches are allowed to grow at their own sweet will, as is very often the case, and in unfavorable peach sections doubtless this is the better method. Occasionally there is a season in such sections when the fruit is thin on the tree and all the branches possible are required to produce a full crop—with this method or lack of method. Whenever there is a full set of fruit, it should be thinned so that the peaches are not closer than five inches apart. This is the secret of profit in growing peaches, viz., thinning the fruit so as to produce large, fine specimens.



**New Frost Proof Peach Crosby,**



The following have been selected after an examination of more than one hundred different sorts in bearing, the best only being chosen. They furnish a succession for about two months, commencing the early part of August or last of July :

- AMSDEN—Medium size ; skin greenish white, nearly covered with purple in the sun ; flesh melting, juicy, sweet, very good ; ripens at the same time as the Alexander, and appears to be nearly, if not identical. A clingstone.
- ALEXANDER—Very early ; of good size ; handsome and regular in form with deep maroon shade, covered with the richest tint of crimson, rich and good in quality with a vinous flavor. Very hardy and very productive. Clingstone. July.
- X BOWSLAUGH LATE—This is an extremely hardy and wonderfully productive peach of excellent quality, rather dark color and homely exterior ; the flesh is yellow, firm and excellent ; ripens a little later than Late Crawford and scarcely ever fails to produce a heavy crop.
- BARNARD'S EARLY—Medium to large ; yellow, cheek purplish red, flesh yellow, red at the stone, juicy, sweet and rich. One of the very best yellow flesh peaches. First of September.
- BOKHARA No. 3—From Iowa, where it is claimed to have withstood 28 degrees below zero without injury to the fruit buds. Fruit large, yellow, of good quality and a perfect freestone, skin tough. Season early—before Early Crawford.
- CHAIR'S CHOICE—Deep yellow with red cheek. A peach highly recommended. Ripens a few days before Smöck.
- CROSBY—This extra hardy, yellow flesh, freestone peach is still at the head of the list for hardiness. Is exceedingly productive, in fact more than half the fruit should certainly be thinned from the tree usually, in which case with good cultivation on rich soil Crosby is a good sized handsome peach, but if allowed to overload, as it will if not thinned, or if planted on poor soil, the fruit will be small (just as any other peach would, with a similar opportunity, with the same number of peaches on the tree and conditions equal) ; only a trifle smaller than Early Crawford.
- CARPENTER'S SEEDLING—Originated at Winona. Is an early peach, similar to Hyne's Surprise, and ripening about the same time.
- CARLISLE—A peach of the very highest quality, yellow flesh, freestone, medium to large size, and ripens between Early and Late Crawford. Its hardiness, productiveness and high quality make it valuable.
- CHAMPION—A very large, hardy, white peach, ripening about the same time as Early Crawford and highly recommended in Ohio, from which region it comes—especially on account of hardiness and hence productiveness generally.
- CRAWFORD'S EARLY—This very beautiful and most popular of yellow peaches is highly esteemed for market purposes. Fruit very large, oblong ; skin yellow, with fine red cheek ; flesh yellow, juicy, sweet and excellent. First of September.

**CRAWFORD'S LATE**—Fruit of the largest size ; skin yellow or greenish yellow, with dull red cheek ; flesh yellow ; productive. One of the finest late sorts. Last of Sept.

**CONKLING**—Large and handsome ; golden yellow, marbled with crimson ; flesh pale yellow, very juicy, sweet, vinous and very good. Tree vigorous and yields heavy crops. Succeeds Crawford's Early.

**ELBERTA**—A grand new peach, of large size and handsome appearance ; yellow flesh, freestone. Ripens about a week after Early Crawford. Very productive and somewhat hardier in the bud than Early Crawford. This is now recognized as the leading large yellow peach of its season either for home market or for foreign market. It has but one apparent defect, viz. : the leaf is more subject to "curl leaf" than many sorts, it is in fact one of the weakest in that respect.

**EARLY CANADA**—This early peach is a native of Jordan, Ont., a chance seedling brought out by the late A. H. High. Ripens one month before Crawford's Early. Good samples measure over seven inches in circumference ; unusually hardy for a peach. Middle to end of July. Resembles Alexander very much.

**EARLY RIVERS**—Large, light straw color, with delicate pink cheek ; flesh juicy and melting, with very rich flavor. About a week earlier than Hale's. Very hardy and very productive. One of the most regular bearers I know of, but is a clingstone. August.

**EARLY RICHMOND**—Very hardy, productive peach, coming in with Hale's Early, and being nearly a freestone it will sell readily when the other peaches are much cheaper. A desirable variety to plant. Resembles Hale's Early in appearance very much.

**FOSTER**—Large ; deep orange red, becoming very dark red on sunny side ; flesh yellow, very rich and juicy, with sub-acid flavor. Very handsome. First of September.

**FITZGERALD**—Originated at Oakville, Ont. A very large hardy yellow peach, freestone, ripening just close after Early Crawford, which it somewhat resembles. No doubt a valuable hardy sort.

**GREENSBORO**—A new peach, said to be double the size of Alexander and ripening at the same time, and a freestone ; flesh white, juicy and good. If these claims are substantiated and if the tree is hardy and productive as is claimed, it will be the most desirable very early peach yet introduced. Not yet fruited in this locality.

✓ **GARFIELD OR BRIGDON**—Originated in Cayuga Co., N.Y. Flesh yellow, very rich, and juicy ; color deep orange red, becoming red on exposed side ; very attractive ; foliage large, green, glossy and peculiar ; size, very large. First of September. Season immediately after Early Crawford, which it resembles.

**GLOBE**—A rapid vigorous grower and enormous bearer, fruit very large, globular in form ; flesh firm, juicy, yellow, shaded with red crimson towards the pit or stone ; quality good, very rich and luscious. Last of September.

**HYNE'S SURPRISE**—A handsome peach, white flesh, color similar to Hale's Early. Ripens at about same time. Productive, but is not nearly so subject to rot, and nearly a freestone.

**HONEST JOHN**—Medium to large ; yellow ; flesh yellow and of good quality. Tree vigorous and productive. Immediately before Early Crawford.



**HALE'S EARLY**—Fruit medium to large size, skin clear, smooth, white, delicately marbled with bright and dark red on sunny side; flesh very melting, juicy and highly flavored. Middle of August. The last of the early peaches and usually sells well.

**HILL'S CHILI**—Medium size, dull yellow, tree very hardy, a good bearer; highly esteemed as a market fruit. Almost identical with Longhurst, if not the same. Last of September.

**JACQUE'S RARERIPPE**—Very large, deep yellow; has a high reputation, as it is undoubtedly one of the very best large yellow peaches and coming in at a season when such peaches are in demand. Middle of September.

**KLONDIKE**—A new peach and now described for the first time. Tree found in a private kitchen garden at St. Catharines, grown from a chance seed. Fruit is large to very large—specimens from the tree in the season of '97, when it yielded fifteen twelve quart baskets, measured nine inches in circumference. Color white ground nearly overspread with dark purplish crimson; quality excellent, very juicy, rich and delicious; truly a magnificent eating peach. Freestone, and ripens a week before Yellow St. John or nearly two weeks before Early Crawford, and should take a front rank among early peaches.

**LONGHURST**—Originated in Ontario. Is extremely hardy, bearing annually large crops where most others will not bear at all. Yellow flesh, freestone, and on account of hardness of tree, period of ripening and general good qualities, makes it very valuable for market. It is not as handsome as Early Crawford, Elberta or other large yellow peaches, nor quite as large, even if thinned as it should be on the tree. Ripens between Late Crawford and Smock, or middle to last of September.

**MOUNTAIN ROSE**—Large; red; flesh white, juicy, rich and excellent; one of the best early peaches. Should be in every collection. Last of August, or just before Early Crawford.

**MILLIONAIRE**—A seedling found growing in a kitchen garden at St. Catharines. Size is extra large, quality cannot be surpassed, deep orange yellow flesh, small pit—that parts readily from the flesh; orange with deep crimson cheek, making it one of the most attractive peaches in existence, as well as excellent in every way. Ripens a week later than Early Crawford, at a time when large yellow peaches are in demand—consequently very profitable. The original tree bore three twelve quart baskets of fruit when four years old, from the seed, which would be like a tree three years old from the nursery, which indicates great productiveness.

**NIAGARA**—A very large, fine yellow peach of recent introduction, said to be very hardy, of fine quality and handsome appearance and ripening. This peach has been grown and tested around Lockport, N.Y., and some of the best growers there claim this is one of the very best peaches ever introduced and are planting it largely.

**NEW PROLIFIC**—Another fine large yellow peach, ripening after Early Crawford, and being very highly praised in Michigan, where it is said to be very hardy and productive and of fine quality and appearance.

**OLD MIXON FREE**—Large, pale yellow with deep red cheek; tender, rich and good; one of the best white flesh peaches, very hardy and productive. First to middle of September.

REEVE'S FAVORITE—Large, roundish, yellow with red cheek; flesh yellow, juicy, melting. Early part of September or just between Early and Late Crawfords, and so at a very good season for market.

SMOCK—As late a peach as is profitable to plant in Canada. It is also one of the very best peaches grown, in fact I think has more strong points than any other. It is a large yellow peach of first-rate quality, exceedingly productive—should be thinned usually one-half or more; very hardy, and the best shipper I know of, will keep in cool weather sometimes a month in the basket after being gathered, and will shrivel up rather than rot, hence should be one of the very best for export to Europe—or any long distance market. Does admirably on good clay loam.

SALWAY—Large, creamy yellow with crimson red cheek; yellow flesh, juicy, rich and good quality, when fully ripe, but as it ripens later than Smock, I think it somewhat risky to plant largely of it, as it would frequently happen that it would not fully mature.

SCHUMAKER—A very early peach, of the type of Alexander, and closely resembling that variety in every way. The skin, however, seems to be more highly colored, and the fruit therefore more showy.

X STEWART—A very large fine looking yellow peach of exquisite quality, a match in size, appearance and flavor to the best Early Crawford, and ripening at the same time, but with this marked and important difference—it bears every year that any peach bears. The original seedling tree has borne nine successive crops—while Crawfords all around it have only produced four crops in that time. This peach will, without doubt, take the place of Early Crawford when better known. The tree is a good strong grower, hardy in the bud, healthy foliage, and as free from “curl leaf” as any peach.

SALWAY—Fruit large, deep yellow with a rich marbled brownish cheek; firm, juicy and rich. October.

STEVEN'S RARERIPe—Fruit resembles Old Mixon Free, being of very high color and very beautiful, quality extra fine. Very productive and free from disease. Commences and ripens immediately after Late Crawford and continues three or four weeks. Last of September and first of October.

SNEED—This is the very earliest peach I know of at present, being a week in advance of Alexander—hitherto the earliest. It is a clingstone, juicy, of medium size and good appearance, and will fill a place on the market not now occupied.

X SMITHSON—This may be under another name. It came here by chance, was purchased by some of our planters for Alexander from a foreign nursery, but has turned out to be a very valuable peach. Very large size, yellow flesh, freestone. An excellent shipper and ripens late, just before Smoch. I regard it as one of the most profitable peaches we have in this section.

TRIUMPH—This is a late introduction, and has not yet been fully tested here, but from authentic information is a valuable yellow flesh peach of medium size, semi-cling, and ripening very early—along with the early clingstones, or in other words very much the earliest yellow flesh peach, and on that account will no doubt be very profitable for market. A couple more years are required to bring out all its good and bad qualities and its exact time of ripening here, some authorities placing it with Alexander, others with Hale's Early nearly two weeks later.



TYHURST—This new peach originated in Essex County, Ont. The following is a description given by W. W. Hillborn, formerly Horticulturist of Ottawa Experimental Farm, and now living near the home of the Tyhurst peach, at Leamington, Ont.: "The Tyhurst peach is of medium size, nearly round, bright orange yellow, sometimes splashed and streaked on the sunny side with carmine. It is of the best quality, to my taste much better than Early Crawford. The tree is of a low spreading habit, the branches have more of a willowy appearance than other peach trees, and is very hardy. It has borne crops in this locality several seasons when all other sorts failed. The fruit buds appear to be unusually hardy."

WAGER—Medium, yellow, more or less colored on the sunny side; juicy and of fine flavor; bears uniform and large crops, even when other sorts fail. Just after Early Crawford.

WHEATLAND—39 peaches weighed 18 pounds. Was awarded the first prize for size, quality and beauty at the New York State Fair. Ripens along with Late Crawford, and larger than it. Yellow flesh. Freestone.

WONDERFUL—Large to very large, color golden yellow overspread with carmine; flesh yellow, firm and highly flavored; very small pit, which parts readily. October.

YELLOW ST. JOHN—Large, orange-yellow, with a deep red cheek and with yellow flesh. Ripens just before Early Crawford. Very valuable on account of heavy bearing qualities and period of ripening, being the earliest first-rate yellow peach.



A WINONA PEACH.

## PLUMS.



**T**HE PLUM, like the pear, attains its greatest perfection on our heavy soil, being then most free from disease. There is no country where plums thrive better than Ontario, especially near the various lakes and bays that nearly surround the southern part, and there are few fruits less likely to glut the market, as they are in demand in enormous quantities by the canning and jam factories as well as for home use by the citizens. Plums would pay large profits at 50c. per bushel and leave a margin of profit even at 25c. per bushel, in years of heavy crops on full-grown orchards on good soil and well cared for.

Until the Autumn of 1897 plums were not offered in quantities at low prices regularly. In the year 1895 the prices were so high that our factories imported their supplies from New York State, where the price was less than half of the price here at Winona, where we had an excessively heavy crop, bringing about \$3 per bushel or over \$2,000 per acre on full-grown first-rate orchards; consequently our jam manufacturers have been unable to secure and maintain a foothold in foreign markets. However, with the largely increased acreage now planted it is safe to say the factories can



depend on moderate prices and full supplies every year, so that they can establish themselves in foreign markets, and we growers can depend upon a steady market at a fair paying price for all we may plant. We can certainly grow plums cheaper than almost any other country and ought to more than be able to compete in the world's markets with jam.

In the season of 1897, some cases of Quackenboss and German Prune sent to England in cold storage, brought at the rate of \$8 per bushel there. England usually grows large crops of plums, sometimes however there is a failure, and more over some of our plums would arrive after the English crop is harvested. Manitoba will take twenty times the plums it now takes when we adopt better methods of packing and shipping. Manitoba now uses chiefly California plums—we can supplant California in that market if we try.

So far I have spoken of the commercial aspect of plum growing—aside from this no family in Canada, even in the remotest northern sections, has any excuse for being without a bountiful supply of plums. They grow so easily on almost any soil, and there are varieties hardy enough to endure almost any degree of cold, and the diseases of plums are so few and so easily controlled with our present knowledge.

NOTE—Where period of ripening is definitely fixed, it is from experience on the Helderleigh Fruit Farms during the season of 1897. Other seasons might be earlier or later, but doubtless the comparison would be about the same between each other.

ARCHDUKE—Very large, color blue, quality only medium ; productive. A valuable market plum. Last of September.

ABUNDANCE—A very thrifty and beautiful tree ; early and profuse bearer of medium sized amber colored plums, turning on the sunny side to cherry red ; flesh yellow and of excellent quality. Japan origin. Ripens Aug. 12th to 15th.

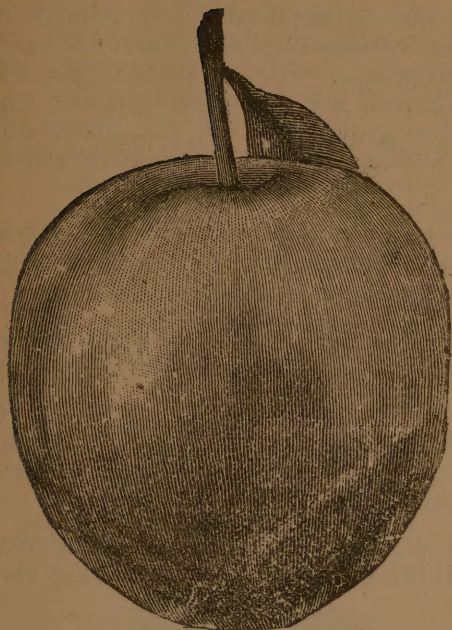
BURBANK—Of the many varieties introduced from Japan, the Burbank is the most promising, its flavor being the best. The tree is universally vigorous, and has strong branches, and begins to bear, usually, when two years' old. The skin of the fruit is thick and is almost curculio-proof. An admirable shipping variety ; ripens early, but not so early as Abundance. August 23rd to 27th.

BEAUTY OF NAPLES—A variety of the highest excellence ; size large, color greenish yellow ; flesh firm, juicy and very fine flavored ; tree very hardy and prolific. September 7th to 10th.

BLEEKER'S GAGE—Above medium ; yellow, juicy and rich, productive. End of August.

BRADSHAW—Fruit very large, dark violet red, flesh yellowish green, juicy and pleasant ; productive. August 25th to 30th.





CANADA ORLEANS—A very large plum of excellent quality, greenish ground with red cheek; very productive, tree hardy and moderate grower. Early Sept.

CZAR—Very large purple plum, a heavy cropper. A valuable plum for either home use or market. Vigorous grower. Ripens very early.

COLUMBIA—A magnificent large purple plum, ripens with Quackenboss, which it much resembles. A plum that sells at sight. Sept. 7th to 15th.

COE'S GOLDEN DROP—Very large and handsome, light yellow, firm, rather coarse quality, one of the most profitable late plums; enormously productive, tree not a very strong grower, requires rich soil. Sept. 20th to 25th.

DIAMOND (Black)—Very large, oval, purple; very productive; does not rot; an excellent shipper and one of the very latest plums. Season October.

DE SOTA (Americana Species)—Extremely hardy, suitable for the most northern parts of Ontario, Quebec and New Brunswick; medium size, yellow with red cheek, quality fair; very productive, tree vigorous. Season medium.

DUANE'S PURPLE—Large size, roundish and oblong, color a reddish purple, flesh rather coarse; bears extremely well. Sept. 4th to 8th.

EMERALD—A new plum now offered for the first time. This plum is a seedling from Ontario, crossed it is supposed with Green Gage. Originated by the late Warren Holton, of Hamilton, Ont. I paid One Thousand Dollars for the exclusive control of this plum and offer trees for sale in the fall of 1899. This plum will upset all calculations as to the money to be made from Abundance, Willard, or any other very early plum, on account of their earliness—for it is ripe and gone before they begin to ripen. In 1897 the crop ripened between August 1st and 5th, or ten days before the first Abundance, and plums have been ripe in July upon it every season it has borne, prior to 1897. The tree is now ten years old. The color is greenish yellow, form roundish, size large, about the same as Washington, of good average size, not as large as very large Washingtons. The quality is excellent, almost equal to Green Gage its supposed parent. It has loaded heavily every season that other varieties have borne crops at all in Mr. Holton's orchard, and he has a great number of varieties there in bearing. It has never been known to rot, while other sorts all around it have frequently rotted badly. What more is to be desired in a market plum? I know no good point it lacks. When it ripens there are no other plums in the market, except Californias, selling at that time last season at equal to a dollar a basket. Three weeks later our fine Bradshaws started at fifty cents and dropped to thirty later. One acre of Emerald plums would realize from a full crop One Thousand Dollars—to the men who plant first.



**EMPIRE**—This plum is slow to grow in the nursery but is such a valuable plum in the orchard that it should be planted extensively for market. It looks exactly like a Lombard in every way except size. It is at least double the size and equally productive as that well-known and deservedly popular sort when this is said enough is said, any plum grower will see at a glance the profit there is in growing such a plum. The soil should be rich and strong as it is not a vigorous grower.

**FOREST ROSE** (Americana Species)—Is very hardy, enormously productive, tree wonderfully vigorous; fruit medium, round, yellow with red cheek; quality fair for Species. Looks handsome, and is valuable in the far north.

**FIELD**—Tree strong grower, early and abundant bearer; fruit large, oval, reddish, ripens earlier than Bradshaw; promises to be very valuable, on account of large size and earliness. Aug. 22nd to 25th.

**FELLENBERG** (French or Italian Prune)—A fine large late plum, oval; purple; flesh juicy and delicious; parts from the stone; fine for drying. Tree a moderate grower, productive. September 20th to 25th.

**GENERAL HAND**—Very large, oval, golden yellow, quality coarse; moderate bearer, tree wonderfully vigorous. Fruit brings high price on account of very large size. September.

**GUEII**—Fruit very large, deep bluish purple, covered with thick bloom; flesh yellowish green, coarse, sweet and pleasant; great bearer and very early, tree a hardy and rapid grower. Sept. 1st to 5th.

**GERMAN PRUNE**—A large, long, oval variety, much esteemed for drying; color dark purple, very agreeable flavor. This will be one of the very best for export, as it does not rot readily, and the German Prune I offer is a large, fine looking plum. Sept. 20th to 25th.

**GRAND DUKE**—Color of Bradshaw; fruit very large, of fine quality, freer from rot than most sorts; very productive; one of the best late varieties for either home use or market. Tree only a moderate grower. Sept. 12th to 20th.

**GLASS SEEDLING**—A very fine, large, purple plum, resembling, if not identical with, Quackenboss; very hardy. Tree strong and thrifty, does not begin to bear early, but bears heavy crops of plums that fetch the top price when it does commence. Sept. 8th to 12th.

**HULING'S SUPERB**—Very large and handsome, yellowish green, juicy, rich and good. End of August.

**HAWKEYE** (Americana Species)—Very hardy and one of the best of this class, fruit medium size, color red, quality fair; very productive. Season medium to late.

**IMPERIAL GAGE** (Flushing Gage, Prince's Imperial Gage)—Fruit large, oval, skin pale green, flesh juicy, sweet, rich and excellent. Tree very vigorous and productive. Sept. 1st to 5th.

**JEFFERSON**—A fine variety; yellow with a red cheek; flesh orange-colored, juicy and rich; parts from the stone. Tree a slow, poor grower, but productive. End of August.

**KELSEY** (Japan)—A magnificent large yellow plum of excellent quality, far ahead, both in size and quality, of most Japan plums. Season very early, about same time as Abundance, but unfortunately too tender except for the very best peach sections.



**KINGSTON**—Very large purple plum and very productive, oval in form, quality only fair; season latter part of September. This plum, on account of productiveness, handsome appearance, early bearing qualities and large size, will be a very profitable variety to plant for market.

**LOMBARD (Bleaker's Scarlet)**—Medium, round, oval, violet red, juicy, pleasant and good; extremely productive, a valuable market variety, one of the most hardy and popular. Sept. 9th to 15th.

**LOWRY'S GAGE**—A plum never before offered to the public. A tree, a chance seedling, was found growing in a neglected fence corner at St. Davids, Ont., and the fruit ripening every year very early—several days in advance even of Bradshaw, and producing very heavy crops every year, was thought worth introducing, and it is now offered for sale with a hope that it may prove remunerative. Color yellow, size medium, quality first-rate.



*Lincoln*

**LAWRENCE**—A fine yellow plum of excellent quality and very productive, medium size. Season September.

**LINCOLN**—A seedling of Green Gage, claimed to be the largest plum grown, specimens over six inches around being quite common according to the introducer, and weighing over two ounces—selected specimens weighing four ounces, of the most excellent quality and extremely productive; reddish purple in color and very attractive. From a few specimens on my trees, I judge the claims of the introducer may not be exaggerated. Season medium.

**MOORE'S ARCTIC**—Originated in Maine, and celebrated for its remarkable hardiness, freedom from curculio, and great bearing qualities. Fruit grows in large clusters; dark purple; flavor very fine, both for preserving and dessert. A long keeper. Sept. 2nd to 7th.

**MONARCH**—Fruit very large; roundish oval; dark purplish blue; freestone; of excellent quality; tree robust and an abundant bearer—trees three years from the graft bearing large crops of fine plums. Fruit does not crack with heavy rain. This plum is very valuable, and is probably the best late plum now grown; it may be considered entirely free from damage by rain or rot. Sept. 28th to Oct. 2nd.

**MONROE**—Medium, excellent, vigorous grower and abundant bearer. September.

**MONROE EGG**—A magnificent large greenish yellow plum of good quality, loads very heavy and is one of the most valuable plums for either home use or market.

**McLAUGHLIN**—Large, yellow, firm, juicy, luscious, productive; nearly, or quite equal to the Green Gage. Early September.



NIAGARA—Origin uncertain; very large, reddish purple, entirely covered with gray bloom; flesh deep greenish yellow. Resembles Bradshaw. Aug. 28th to Sept. 2nd.

OGON—Fruit large, round, bright golden yellow, with faint bloom; flesh firm, rather coarse in quality; vigorous and hardy. Japan origin. Aug. 15th to 20th.

PRINCE ENGELBERT—Very large and long; deep purple; rich and excellent. Tree very vigorous. One of the best. Sept. 4th to 9th.

POND'S SEEDLING—A magnificent English Plum; light red, changing to violet; quality fair to good; abundant bearer. One of the most attractive in cultivation. Sept. 11th to 17th.

PURPLE EGG (Hudson River Purple Egg)—Highly esteemed by growers along the Hudson River; described as one of the richest and finest flavored plums we have; stone free; good size, with nice bloom, resembles the German Prune; good bearer, and brings good price in market; tree bears young. Sept. 9th to 15th.

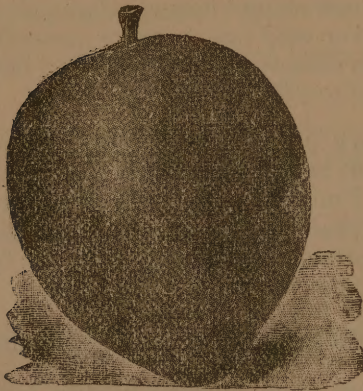
PETER'S YELLOW GAGE—Fruit medium, nearly oval; skin pale yellow, sometimes with crimson dots in the sun, and a thin light bloom; flesh yellow and of good quality; tree moderately vigorous and very productive. Season, Sept. 5th to 10th.

PRINCE'S YELLOW GAGE—Above medium size; deep yellow; flesh yellow, rich, melting and sweet; productive. August.

PRINCE OF WALES—Round, reddish purple, large size, quality excellent; very productive. Season September.

PRUNE DE AGEN—Medium size, productive, violet purple color, quality excellent. Season medium.

QUACKENBOSS—Large, oblong, oval, deep purple, a little coarse, sprightly, juicy, sweet and excellent. Adheres slightly to the stone; productive. Valuable for market. Commences to bear somewhat late. September 8th to 15th.



RED JUNE.

RED JUNE—This is one of the most promising of the newer Japans, fruited for the first in many places in the north in 1897 and made many friends. A vigorous, upright tree like Abundance, also like it being very productive; fruit medium to large; deep vermillion red with fine bloom, hence very attractive; quality very good, flesh yellow, half cling, pit small. Ripens early, about with Abundance.

REINE CLAUDE DE BAVAY—Large, nearly round, greenish yellow; juicy, melting and excellent; enormous bearer. Rightly regarded as one of the most profitable plums for market, as well as one of the very best for home use. Tree is only a

moderate grower in the nursery but seems to grow better in the orchard. September 20th to 30th.



**RED EGG**—A very vigorous upright growing tree, bearing handsome large fruit of bright scarlet color; productive. Season medium.

**RICHLAND**—Above medium size, oval, reddish purple, quality fair. Valuable for market. Season early.

**REINE CLAUDE VIOLET**—A richly flavored Gage of a purple color, bearing heavy crops of fruit in September.



**SHIPPER'S PRIDE**—Large reddish blue plum, very hardy and productive. September 8th to 12th.

**SHROPSHIRE DAMSON**—Plum of fine quality, as free from the attack of the curculio as the common Damson, and of same color. Flesh is amber color, juicy and sprightly. Size small. Sept. 25th to 30th.

**SIMONI (Apricot Plum)**—The tree somewhat resembles the peach; fruit a brick red color, flat, flesh apricot yellow, firm with a peculiar aromatic flavor, hardy and valuable as an ornamental fruit tree, bears abundantly and very young. August 12th to 20th.

**SMITH'S ORLEANS**—Large size, reddish purple, flesh firm and juicy, with a rich, fine flavor; very productive. September 4th to 10th.

**STANTON**—Originated in New York State; tree is a symmetrical grower; fruit medium to large, nearly round, deep purple with blue bloom, quality best, ripens and keeps late. About end of September.

**SPAULDING**—Tree rank grower, enormously productive, more exempt from curculio than most plums; firm, sweet and rich in quality; free stone; color yellowish green. August.

**SARATOGA**—Color nearly red; one of the largest plums grown; bears early and produces heavy crops; vigorous grower; fine quality.

**SAUNDERS**—A plum of Canadian origin, introduced at Fonthill. Size above medium, color bright golden yellow, quality good, bears well at an early age—has a peculiarity of bearing in the tree and not on the ends of the branches which is a good trait; tree a poor scraggy grower, requires rich soil. Season very early—August 20th to 25th.

**SATSUMA**—A Japan plum of very large size, not a heavy bearer as most Japans are; flesh is blood red, color of skin reddish with yellow ground. I do not think that it is particularly desirable for market. September.



**VICTORIA (Sharp's Emperor)**—One of the finest plums in cultivation; of large size; fair quality; skin light yellow, marbled, spotted, and shaded with light lilac and crimson. Tree a free, irregular grower and most abundant bearer. Middle of September.

**WARNER'S LATE (Middleburgh)**—Fruit large; skin red, with a blue bloom; very fine grained; free, vigorous and productive, and said never to be troubled with black knot. Ripens in October after nearly all others are out of the market.

**WEAVER**—Fruit medium, color red, very prolific, constant and regular bearer and of fair quality. The tree is very hardy, not being injured in the severest winters even at Ottawa and Montreal; belongs to the Americana species. August.

**WASHINGTON**—Very large, when ripe clear yellow, marked with red; flesh firm, very juicy and excellent; very popular and very productive. August 30th to September 5th.

**WILLARD (Japan)**—Quality poor, color dark red, size medium; productive; when ripe drops easily from the tree. Season very early—about a week before Abundance, or August 7th to 10th. Not to be recommended very highly however.



WICKSON (natural size).

**WICKSON**—Another of the new Japanese sorts, and claimed to be the most promising of all for a general cropper. Tree upright and vigorous, productive at an early age like most Japanese sorts; fruit of very large size, often 8 or 9 in. around, when ripe a deep crimson color, quality said to be excellent; blooms very early and so may more likely, even than the other Japans, be caught occasionally in some sections by late spring frosts. Season follows Burbank.

**WOLF (Americana Species)**—Very hardy and a valuable plum for the extreme north; rather above

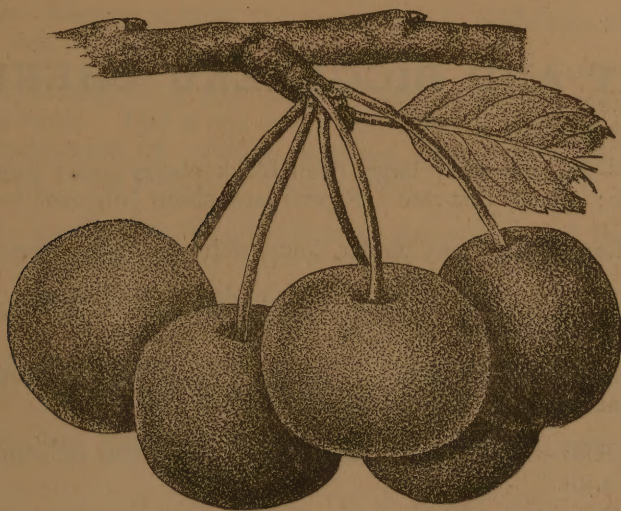
medium size, form round oval, color red, quality below medium; very productive. Season medium.

**YELLOW EGG, OR YELLOW MAGNUM BONUM**—Very large, egg shaped, excellent for cooking, good and productive. One of the most profitable market plums, on account of large size, productiveness and hardiness. Sept. 10th to 15th.



## CHERRIES.

**G**HERRY TREES will thrive in most every part of Canada on suitable soil. The soil must be dry ; it may be light sand or clay loam, or any soil between these ; the only stipulation is dryness. Cherry trees will not thrive on flat or wet land. The Hearts and Biggereaus, commonly called English cherries, are strong, rampant growers, and should be set 20 feet apart. They are not hardy enough except for southern and favorable parts of middle Ontario and the favorable parts of the Maritime Provinces and British Columbia. They bear enormous crops, frequently as much as 300 quarts from single trees and in some cases much more, and are always in demand at good prices. At present there is a large profit in a cherry orchard in full bearing.



The Morello cherries thrive over a much wider area, some of the varieties being hardy enough for all sections of Canada, and these are equally profitable with the Hearts and Biggereaus in most cases. Red cherries of the Morello class are wanted by every householder in the land, hence the demand is enormous and never satisfied.

Black knot attacks the Morello but does not attack the others. Black knot, however, is no longer any bugbear to fruit growers. It is only necessary to examine the trees two or three times a year and cut off and burn any knots found when in the green state to prevent it spreading further. It can only spread from ripe spores or BLACK knots.



Sour cherries or Morellos should be planted about 14 feet apart, and if the ground is rich so much the better. Sour cherries also require dry ground but are not quite so fastidious in that respect. The Morellos have slender spreading branches.

The third class into which cherries are usually divided is the Duke. These grow very upright and stout but do not require the room necessary for Hearts and Biggereaus. The fruit is semi-acid. The tree is subject to black knot, though perhaps not quite so subject to it as the Morellos. The Dukes to, bear heavy crops and are hardier than Hearts or Biggereaus ; indeed, the Dukes occupy a place midway between the other two classes, as near as can be, in many respects.

HEARTS AND BIGGEREAUS—Of these Napoleon Biggereau is my choice for first place among the light colored, and Black Tartarian, Windsor, and Schmidt's Biggereau, among the blacks. Dates of ripening are those of 1897 at Helderleigh and may differ other seasons, but are given for comparison and are exact when so stated.

## HEART AND BIGGEREAU CHERRIES.

BLACK OXHEART—An extremely large, deep black cherry ; very productive ; tree a strong grower ; quality first-rate. Ripens late, about July 20th to 25th.

BLACK EAGLE—Large black, very tender, juicy, rich and highly flavored. July.

BLACK TARTARIAN—Very large, bright purplish black ; half tender, juicy, very rich, excellent flavor, productive. July 1st to 10th.

COE'S TRANSPARENT—Medium size, pale amber, red in the sun ; tender, juicy, rich, handsome, one of the best ; productive. End of June.

DOWNER'S LATE RED—Large, light red, tender, juicy and delicious ; productive. July 15th to 20th.

ELTON—Large, fine flavor, pale yellow, light red next the sun. End of June.

ELKHORN (Tradescant's Black Heart)—A fine, large, black cherry of good quality productive. July 20th to 25th.

EARLY PURPLE—Small to medium size, purple, tender, juicy, sweet. Middle of June.

GOV. WOOD—One of the best cherries ; very large, light red, juicy, rich and delicious. Tree healthy and great bearer. End of June.

IDA—Medium to large, pale yellow nearly covered with light red ; juicy, and of good quality ; abundant and regular bearer. Ripe latter part of June.

KNIGHT'S EARLY—Large, black ; tender, juicy, rich ; productive. Ripe before Black Tartarian or about the end of June.

NAPOLÉON BIGGEREAU—Very large, pale yellow or red, very firm, juicy and sweet ; productive. One of the best. July 10th to 15th.

- ROCKPORT BIGGEREAU**—A firm, large, light colored cherry with red cheek. Ripens at the same time as Black Tartarian.
- SCHMIDT'S BIGGEREAU**—A most promising cherry; fruit of immense size, of a rich, deep black; flesh dark, tender, very juicy, with a fine flavor; bears abundantly, and makes a most noble dish for the table. July 15th to 20th.
- WINDSOR**—Originated at Windsor, Ont. Is a late, large, productive, black cherry, very valuable for both home use and market. July 15th to 20th.
- YELLOW SPANISH**—Large, pale yellow, with red cheek, firm, juicy and excellent, one of the best light colored cherries; productive. July 1st to 5th.

## DUKES AND MORELLOS.

- DYEHOUSE**—Partakes of both the Duke and Morello in wood and fruit; a very early and sure bearer, ripens a week before Early Richmond, of better quality and quite as productive. Last of June.
- ENGLISH MORELLO**—Medium to large, blackish red, rich, acid, juicy and good; very productive. Last of July and Early August.
- EARLY RICHMOND (Kentish Virginian May)**—Medium size, dark red, melting, juicy, sprightly, acid flavor. This is one of the most valuable and popular of the acid cherries, is unsurpassed for cooking purposes and is exceedingly productive. Last of June and first of July.
- EMPRESS EUGENE**—Large, dark red; productive; tree robust and hardy, belongs to Duke class. Ripe about first of July.
- LATE DUKE**—Large, light red, late and fine. July.
- LARGE MONTMORENCY (Morello type)**—A large red, acid cherry, larger than Early Richmond and fully ten days later. July 15th to 25th.
- MAY DUKE**—Large, dark red, juicy and rich, an excellent old variety; productive. End of June.
- OLIVET**—Of French origin. Large, globular, very shining, deep red sort, flesh red, tender, rich and vigorous, very sweet, sub-acid flavor. Last of June.
- OSTHEIM**—A hardy cherry from Russia. It has been tested in the severest winters of Minnesota and has been found perfectly hardy. Fruit only medium size, roundish, ovate; skin red, dark at maturity; stalk long; flesh liver-colored, tender, juicy almost sweet. Ripe latter part of July.
- REINE HORTENSE**—Very fine; large, bright red; juicy and delicious; productive. July.
- VLADIMIR**—Extremely hardy Russian. Tree much smaller than other sorts, fruit of fair size and nearly black. Valuable on account of extreme hardiness.
- WRAGG**—Another extremely hardy cherry of recent introduction from Russia. Later than Vladimir, and like it valuable for extreme northern sections. Ripe end of July, and said to be same as English Morello which it certainly very much resembles.



**BELLE MAGNIFIQUE**—A magnificent large red, late cherry of the Duke class ; fine for cooking and good for the table when fully ripe ; rather acid ; tender and juicy ; very productive ; tree not a very vigorous grower. Ripe about latter part of July.

**DOUBLE NATTE**—A very hardy Morello ; fruit large as Early Richmond ; bright red. Extremely valuable for the north being one of the few really hardy cherries of good size.

**FOUCHE MORELLO**—Another of the very hardy, very productive, bright red cherries, of about the same size as Early Richmond ; will altogether supersede such sorts as Ostheim and Vladimir, the fruit of which is of much smaller size.

**LOUIS PHILIPPE**—An excellent, hardy variety ; very vigorous and productive ; large size ; rich, dark red ; flesh red with mild sub-acid flavor. Season middle to end of July.

**LEIB**—A new Morello from Illinois ; resembles Early Richmond, but a little later. Valued in the north for size and hardiness.

**LATE DUKE**—Large, light red ; late ; excellent sort ; tree robust and vigorous. Ripe latter part of July.

**OREL NO. 25**—One of the late importations from Russia ; tested at the Experimental Farm, Ottawa, and found to be both hardy and productive and fruit of about same size as Early Richmond ; Morello type, as all the very hardy sorts are.

**ROYAL DUKE**—One of the best of the Duke Class ; ripens after May Duke.

**WEIR**—Another new Morello from Russia ; of good size ; bright red color ; very hardy and productive.

## QUINCES.

**T**HE QUINCE is attracting attention as a market fruit. The tree is hardy and compact in growth, requires but little space, is productive, gives regular crops and comes early into bearing. The fruit is much sought after for canning for winter use. When put up in the proportion of about one quart of quinces to four of other fruit, it imparts to them a most delicious flavor. It flourishes in any good garden soil, which should be kept mellow and well enriched. Prune off all the dead and surplus branches, and thin out the fruit if bearing too freely.

**APPLE OR ORANGE**—Large, roundish, bright golden color, cooks tender and is of excellent flavor. Valuable for preserving or flavoring, very productive, the most popular and extensively cultivated variety. October.

**CHAMPION**—A variety originating in Connecticut ; tree is a prolific and constant bearer, fruit averaging larger than the Orange, more oval in shape, quality equally fine and a long keeper, perhaps rather late, except for the earliest sections. October and November.

**MEECHES PROLIFIC**—A free grower, very productive, fruit of good quality, very large and handsome, not quite so hardy as Orange.

**REAS' MAMMOTH**—A very large quince and also productive. Tree a very strong grower. Regarded by many as the most desirable quince to plant.

## EUROPEAN APRICOTS.

**T**HE APRICOT is a cross between the plum and the peach and resembles both in some particulars. The fruit is liable to the attacks of curculio, like the plum, and the tree is subject to the yellows like the peach. In fact, being attacked by the enemies of these two fruits, it ceased to be planted for profit, but of late, very early sorts have been introduced which ripen so much before peaches, and the curculio being now no longer feared, apricots are more largely planted in peach sections. They will scarcely thrive outside the peach belt.

BREDA—Small, but choice quality, rich and juicy. Early August or end of July.

EARLY GOLDEN—Small, pale orange; sweet; hardy; productive. Beginning of July.

HARRIS—This is planted now more largely than any other, as it seems to yield more regular crops, and is of good quality.

MONTGAMET—The latest real acquisition that has been well tested, is of fairly good size and appearance; good quality and ripens early.

MOOR PARK—One of the largest, orange color, with red cheek; very productive; rich flavor. Early August.

ST. AMBROISE—Large, oblong; sugary and rich; very productive. Middle of August.

SMITH'S EARLY—One of the very early sorts, that has lately been introduced, and claimed to be superior to most others.

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## RUSSIAN APRICOTS.

**T**HESE are quite distinct from the European varieties. Their leading characteristics are extreme hardiness, having withstood 30° below zero without injury; early bearing, productiveness, and freedom from insect ravages and diseases. The following are the best that have been thoroughly tested.

ALEXANDER—Very hardy, an immense bearer, fruit large, yellow, flecked with red, very beautiful, sweet and delicious. July.

ALEXIS—Very hardy, an abundant bearer, yellow with red cheek, large to very large, slightly acid, rich and luscious. July.

CATHERINE—Very hardy, vigorous and productive, medium size, yellow, mild, sub-acid, good. July.

GIBB—Tree hardy, grows symmetrical, productive, fruit medium, yellowish, sub-acid, juicy and rich, best early variety, ripening soon after strawberries, a great acquisition. Last of June.

J. L. BUDD—Tree a strong grower and profuse bearer, fruit large, white with red cheek; sweet, juicy, with a sweet kernel, as fine flavored as an almond, the best late variety and a decided acquisition. August.

NICHOLAS—Tree hardy and prolific, fruit medium to large, white, sweet and melting; a handsome and valuable variety. July.



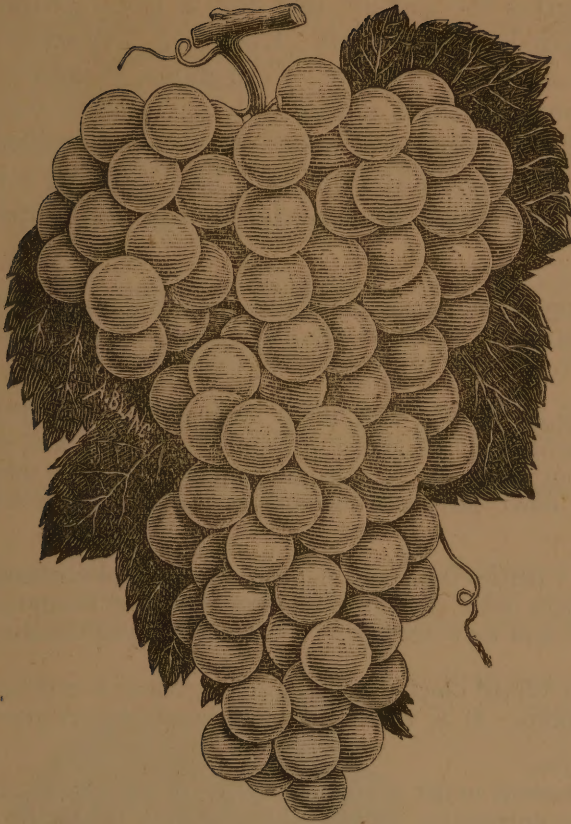
# Read This About My Grape Vines



**T**HE experienced fruit grower and vineyardist knows the value of planting first-class stock. No one can persuade him to plant anything but the best. To those who are accustomed to buy vines from small dealers or growers who do not grade their vines, and to those now proposing to buy for the first, let me urge the following points with regard to my vines :

1. They are grown by a specialist, who knows his trade as well as any man in America, and who produces better vines in one year than inexperienced growers do in two.
2. Making a regular business of growing vines I am not so liable to get varieties mixed, which is an important matter.
3. My vines are dug by appliances unknown to those not in the business largely, and all the roots are preserved, while many may cut and pull off half the roots in digging.
4. **My Vines are Graded.** That is when I offer a vine No. 1, it is a vine selected from perhaps six others that are graded No. 2 and No. 3. My No. 2 vines are better than the average vines sold by inexperienced growers or those who fail to grade carefully and systematically, and these I sell at rates much below No. 1.
5. Please bear this in mind and if you are quoted prices lower than mine do not forget this important matter, or it would be poor encouragement to offer a choice article.
6. My vines are all grown out of doors and are hardy. The wood is taken from bearing vines right here.
7. On receipt of value I will send samples and guarantee to furnish all you require, if in stock, fully up to sample or no sale.

# GRAPES.



**N**EARLY every section of Ontario can produce grapes of good quality, but more particularly the counties bordering on the lakes. We have now grand varieties ripening early enough to suit the northern counties, and hardy enough to stand  $30^{\circ}$  below zero when the wood is well ripened. However, any difficulty about the wood freezing in the winter can easily be overcome by laying down the vines in winter and covering with earth. The soil best suited for a vigorous and at the same time healthy vine is not deep sand, as was at one time supposed, but on the contrary rather heavy clay loam that is moderately fertile and deep. A strong, deep soil well drained, such

as would produce a heavy crop of winter wheat, will produce the best results. The vine does not require heavy dressings of manure on suitable soil; a moderate dressing of cow manure is best when the vines begin to show a lack of vigor. Ashes are beneficial on most soils, but especially on light leachy soils. Vines when planted should have the top removed down to two buds and the following spring down to three buds, and the third spring to one cane from 2 to 4 ft. long, according to the vigor of the vine and the closeness of the buds, say from 6 to 10 buds. This cane should be tied upright to a trellis, and, when the shoots start out, all below a foot from the ground rubbed off, and the stock to this height always kept clean of suckers as fast as they start. The following spring three canes can be left, each having from 4 to 8 buds, according to the vigor of the vine. These are tied in fan shape on the trellis. The fifth spring the vine should be strong enough to bear a full crop and 5 to 8 canes can be



left, having from 4 to 8 buds on each, and this quantity each succeeding year, always bearing in mind the more buds the more bunches, and that a full grown vine should not bear over 20 lbs. of grapes under ordinary circumstances. Each bud on a thrifty Concord should produce a half pound of grapes on an average. I would recommend the following varieties for family use for a good grape section: Moore's Early, Worden, Concord, Roger 4 (Wilder), Campbell's Early, Brighton, Lindley, Agawam, Vergennes, Niagara, Moore's Diamond; for northern sections where only early sorts will ripen, Moore's early, Worden, Campbell's Early, Brighton, Lindley and Moore's Diamond. The Worden is the one best family grape for all sections, combining all the qualities of a perfect grape for home use.

**BRIGHTON**—A cross between the Concord and Diana Hamburg. It gives the best of satisfaction. Bunches large, berries of medium size, dark red; flesh sweet, tender and of the highest quality. Ripens earlier than the Delaware.

**CAMPBELL'S EARLY**—A strong, vigorous grower, with thick leathery foliage, and a heavy cropper, of very large bunches of black grapes—ripening very early and of good quality; skin tough but not too thick; a splendid shipper. A grape that is likely to take the place of all other early and medium early black grapes for market.

**CATAWBA**—Bunches large and loose; berries large, of a coppery red color, becoming purplish when well ripened; ripens with Isabella; requires the most favorable soils and situations, good culture and warm seasons to mature perfectly in Ontario.

**CHAMPION (Talman)**—This variety is valued chiefly for its earliness, being a number of days earlier than the Hartford. It is very productive but of rather poor quality.

**CONCORD**—A popular variety that succeeds under a greater variety of circumstances than perhaps any other grape; universally healthy, vigorous and productive; flesh somewhat buttery, moderately juicy and sweet. Bunch large, nearly black, with bloom; early.

**CLINTON**—The wine grape of Canada, hardy, productive, vigorous, healthy; ripens with Concord; berry below medium size, black, too acid for table use.

**DELAWARE**—One of the finest grapes. Bunches small, compact, shouldered; berries rather small, round; skin thin, light red; flesh very juicy, without any hard pulp, with an exceedingly sweet, spicy and delicious flavor. Vines moderately vigorous, very hardy and productive.

**DIANA**—Bunches a little above medium size, compact; berries large, light red, very juicy and sweet, with distinct, spicy, refreshing flavor; vine a vigorous grower, and bears well; ripens a little before the Isabella.

**EATON**—Black; bunch and berry of very largest size; not quite so early or sweet as its parent, the Concord, but less foxy; pleasant, juicy, with tender pulp; vine very vigorous, healthy and productive.

**EMPIRE STATE**—A white grape, recently praised very highly, but not up to expectations.

**EARLY VICTOR**—In bunch and berry it is rather below the average, but ripens very early, and what is of special importance it is very pure in flavor, with very little pulp and without a trace of foxiness, or other unpleasant taste, while it is exceptionally sweet, sprightly and vinous, never cracks, and adheres firmly to the bunch. Very hardy, and one of the few that resist mildew perfectly. Color black, with a fine bloom.

**EARLY VERMONT (Winchell) (Green Mountain grape)**—A new very early white grape, of excellent quality, and ripens the earliest of any grape of merit; vine not a vigorous grower.

**EL DORADO (Rickett's Hybrid)**—A strong growing, healthy vine; a handsome, white grape, of the same parentage as the Lady Washington, generally bearing handsome, large clusters, of medium berries, highly flavored, tender and juicy, with scarcely any pulp and very few seeds, ripening about with Hartford.

**IONA (Dr. Gratt)**—Bunches large, long, somewhat shouldered and loose; berries medium, of a fine, clear wine color; skin thin; flesh tender, without pulp, with a brisk, sweet, vinous flavor. Ripens a little earlier than Catawba.

**JESSICA**—White; originated in Canada; ripens with the earliest; small to medium in bunch and berry; vine a fair, compact grower, hardy, healthy and productive.

**LADY**—A seedling of the Concord. Of medium size, white and very good flavor; very early.

**LADY WASHINGTON (Ricketts)**—A cross between Concord and Allen's Hybrid. Fruit yellow, tinged with pink; bunches very large, often weighing a pound. Vine strong, very hardy, too late for most sections of Ontario.



**MOORE'S EARLY**

**MOYER**—Red; originated in Canada; vine hardy and healthy; bunches and berries a little larger than Delaware; ripens very early—with the earliest—and hangs well on the vine; resembles Delaware in appearance; sweet as soon as colored; skin thin but tough, pulp tender, rich and juicy. The earliest red grape. Not usually productive.

**MOORE'S DIAMOND**—Vine a vigorous grower, with dark healthy foliage, entirely free from mildew. A prolific bearer; bunches large, handsome and compact, slightly shouldered; color delicate, greenish white, with rich, yellow tinge when fully ripe. Skin smooth and free from specks; pulp tender, juicy, and nearly transparent, with very few seeds. Berry about the size of Concord, rich, sprightly and sweet. Ripens about one week before Concord.

**MOORE'S EARLY**—A seedling of Concord, ten days earlier; vine very hardy, foliage strong and healthy like its parent. Very large bunch and berries, quality first-rate. The best very early black grape.



**NIAGARA**—Originated in Lockport, N.Y., in 1868, and is a cross between the Concord and Cassidy, first fruiting in 1872. It has since regularly borne large crops of fine fruit. The vine is hardy and a remarkably strong grower; the leaves are thick, leathery and a dark glossy green. Very large bunches, uniform and very compact; berries are large or larger than Concord, and skin thin but tough; quality good, with little pulp, melting and sweet; ripens with the Concord.



**POCKLINGTON**—Is a seedling of the Concord. Vine thoroughly hardy, both in wood and foliage. Strong grower; never mildews; is a light golden yellow, clear, juicy and sweet to the centre, with little or no pulp; bunch very large, sometimes shouldered; berries round, large and thickly set.

**VERGENNES**—A chance seedling found at Vergennes, Vt. Free from mildew, very productive, clusters large, berries large, holding firmly to the stems, color light amber, flesh meaty and tender, ripens with Concord, and is an excellent late keeper.

**WYOMING RED**—A very early red grape, desirable for the market and vineyard, a good grower and healthy; bunch and berry small to medium, sweet, but a little foxy. Should be planted more extensively.

**WORDEN**—A seedling of Concord, which it greatly resembles in appearance, but the berries are larger. The fruit is better flavored and ripens several days earlier; a magnificent grape—fruit, vine and foliage. For home use for all sections the Worden is the king of grapes.



WORDEN.

**WOODRUFF RED**—Bunches and berries very large and handsome; very productive, of fair quality, and strong, vigorous grower and iron-clad hardiness.



## ROGER'S HYBRIDS.

There are a great many of these most excellent varieties, combining great productiveness in most with good quality, large size, handsome appearance, excellent keeping qualities. The only weak feature in these hybrids is that the leaves are subject in wet weather to a species of mildew which causes them to drop off, and when this occurs the grapes do not ripen up satisfactorily. Remedies for this trouble, which only occurs in rainy seasons, are now being tried, which are successful. A description here would occupy too much space. The following are some of the most valuable varieties :



**CONCORD**

**AGAWAM (No. 15)**—A large red grape, ripening a little late for any but good grape sections, a heavy cropper and valuable as a choice late table grape. An excellent keeper.

**BARRY (No. 43)**—Very much resembles Herbert, ripens with Concord.

**ESSEX (No. 41)**—Black, bunch and berry very large, productive, ripens rather late.

**GAERTNER (No. 14)**—Red, bunch and berry large, resembles Lindley but berry larger.

**HERBERT (No. 44)**—Black, berry and bunch large, shouldered, one of the best, earlier than Concord.

**LINDLEY (No. 9)**—One of the best red grapes for either home use or market, cluster rather loose, requires long pruning and soil not too rich in humus; ripens earliest of the red grapes except the Moyer, which is a week earlier.

**ROGER No. 11**—Black, resembles Wilder, but scarcely its equal.

**ROGER No. 17**—Black, very early, ripens with Worden, bunch and berry large, strong grower, hardy and productive, one of Roger's best.

**ROGER No. 32**—Red, rather late, hardy, productive. Vine not as vigorous as most Rogers, bunch and berry large.

**ROGER No. 34**—Resembles No. 17, but ripens with Concord.

**ROGER No. 36**—Resembles Wilder, but larger and of better quality.

**ROGER No. 39**—Almost identical with No. 17, and a very choice table grape.

**SALEM (No. 53)**—Very choice red grape, productive, excellent keeper. If picked as soon as ripe and placed in cool dry atmosphere will keep in excellent order until Christmas.

**WILDER (No. 4)**—Black, early, sweet, productive, one of the best, but must not be allowed to overbear, which is its tendency, or it is ruined for several years.

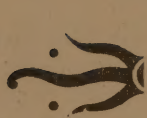


# Small Fruits.



The small fruits, such as strawberries, raspberries, blackberries, gooseberries, currants, etc., ripening from the first of June till Fall, are everywhere capable of successful cultivation and yield large returns at comparatively small expense ; they should have a place in every garden. Since the introduction of self-sealing jars and cans they can be had throughout the year almost as fresh as when gathered.

## STRAWBERRIES.



I HAVE found the best results to follow Spring planting with the following preparation : Plow under clover sod in the Fall, deep as possible ; in the Spring as soon as the ground is in good condition, not before, give a heavy dressing of well-rotted manure, unless land is already rich, rich enough to grow 100 bushels of corn to the acre or 40 bushels of Fall wheat. Harrow and cultivate thoroughly, roll lightly, mark out rows  $3\frac{1}{2}$  to 4 feet apart with a light corn marker ; plant with a spade as follows : Drive it into the mark say 6 inches deep, move it to and fro making a crack, into this a boy flings the roots of the plants with a quick jerk, keeping the crown in his hand, the man withdraws the spade and closes the crack with his foot. A man and boy can plant 4,000 a day in this way, and if carefully and honestly done no plants will be lost. Plants should not be dropped faster than planted, and the roots should be kept moist from the time they are received until they are planted. Keep the plantation well cultivated through the Summer ; soon as the ground is frozen in the Fall cover with straw free of seeds ; remove this in the Spring, cultivate lightly soon as ground is dry, clean out the weeds if any, and replace straw between the rows to hold moisture and keep the berries from being spattered by sand. In this way I have raised 10,000 boxes from  $1\frac{1}{8}$  acres. This was an exceptional crop, of course. In 1889 I picked 15,000 boxes from  $2\frac{1}{2}$  acres.

Varieties marked (P) are pistillate and require another sort planted near, that has perfect blossoms, about one row of the perfect blossoming sort to four or five of the others will suffice, though one to three is safer.

A few leading varieties :

**BRANDYWINE**—This is no doubt the best late sort, being very firm, very large, very productive, a rampant grower, and blossoms are perfect. No one will regret planting it.

**BUBACH (P)**—Strong grower, healthy and free from rust, very productive, of very large bright scarlet berries, rather soft and of fair quality, ripens early and succeeds either on light or heavy soil ; a valuable market variety for a near by market.

**CRESCENT SEEDLING (P)**—Medium, conical, bright, scarlet, very uniform in size. A beautiful berry, commencing to ripen with Wilson's Albany and continuing in fruit longer. The plants are wonderful in growth, taking entire possession of the ground to the exclusion of weeds and grass. It appears alike at home on all soils. Immensely productive, but fruit rather soft and sour.

**CLYDE**—From the evidence of most of the leading growers who have tested this berry, as well as the evidence of Prof. Hutt, of the Agricultural College, Guelph, this is no doubt one of the most profitable, if not the most profitable, sort now before the public. Earlier than Bubach, about same size, very much firmer, dark scarlet color, very productive, strongly staminate. A truly magnificent strawberry in every respect—vine and fruit.

**MICHEL'S EARLY**—The plants grow luxuriantly and multiply rapidly. It is a perfect flowering sort and very prolific of pollen, hence an excellent sort to plant with Warfield, Crescent, or other early sorts that have imperfect blossoms. Berries are of fair size and appearance, but its great merit lies in its earliness, being four to six days earlier than Crescent.

**SAUNDERS**—A very productive berry, much resembling Sharpless in fruit. L. Woolverton, editor of Canadian Horticulturist, describes it thus in American Gardening : "Saunders is another of the good varieties. This variety compares favorably with the Bubach in size and fruitfulness. The fruit is large, conical, slightly flattened, with several depressions ; color deep red, glossy, flesh the same ; flavor sprightly and agreeable, in this respect excelling the Bubach ; perfect blossom. In this last year I find that I could pick fruit of fair size from it after most other varieties were done."

**TENNESSEE PROLIFIC**—This berry came out first in yield in the season of 1897, at the Agricultural College experiments, Guelph. It is a very large berry, and ripens nearly with the very earliest, is firm and of good color, and a strong grower. It would seem therefore to be about at the head of the list.

**THE WILLIAMS STRAWBERRY**—The plant is all that can be desired, being robust and free from rust. It sets an abundance of plants like the Crescent and should stand the winter as well. The blossom is perfect and it should be an excellent sort to fertilize Haverland, Bubach, Crescent or any berry blossoming at same time. The season is same as Wilson. The berry is firm and a splendid shipper, a thing of the utmost importance, as too many of the new sorts, as well as the old Crescent, Manchester and Sharpless, are too soft for distant markets. The size is large, to very large. The color is bright, and it is very productive.



VAN DEMAN—An extra early perfect flowering variety, a seedling of Crescent crossed with Capt. Jack. After having been tested at twenty-seven State experiment stations the following report from New York State is a sample of many favorable reports : “This is the best extra early variety ever tested on the Station grounds. The first picking of three quarts of any one variety was picked from this, and it continued in bearing for twenty-one days, ripening the bulk of its fruit, however, in ten days. The vigor of the plants is good, growth stocky, and fruit hid beneath the dark foliage ; berries a showy glossy scarlet, with yellow seeds, firm and tart. I am of the opinion that this variety has a great future.

PETER COLLIER, *Director.*”

WARFIELD (P)—Plant is very vigorous, blooms very early but has such tall, rank foliage as to protect the bloom from early frosts ; fruit of medium size, perfect form, bright red color, fair quality and very firm. Strongly recommended as a promising market variety.

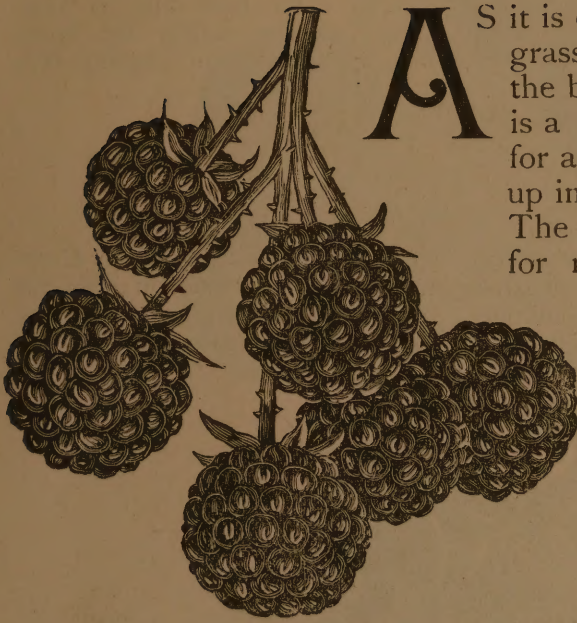
WILSON—This grand old favorite is now giving way to newer sorts, though for an all round rough-and-tumble sort, it is hard yet to excel it, being so firm, productive and good looking.



Marlboro Raspberry.



## RASPBERRIES.



**A**S it is difficult to eradicate clover or grass from Red Raspberries, I find the best preparation of the ground is a summer fallow, manured as for a crop of fall wheat and ridged up in the fall, ridges six feet apart. The ground must be well drained for raspberries. In the spring,

harrow and cultivate, mark out crosswise with corn marker  $2\frac{1}{2}$  feet apart, open up double furrow in the centre of the ridges, only as fast as planted so ground will not get dry, stretch out roots both ways in the furrows, plant about six

inches below the level of the land, allowing for ridges. Pack fine moist earth about the roots and cover loosely at the top, cultivate both ways, nip off young growth at two feet high. Second year cultivate only one way, allow the cane every six inches in the row, cut the rest off same as weeds. Another plan, producing berries of larger size and with less labor, is to plant five feet apart each way and cultivate both ways permanently, leaving about four to six shoots in a hill. Where large plots are set I think this the better system as it involves less hand labor and produces a better grade of fruit, and I believe more of it. The best soil for raspberries is sandy loam.



**CUTHBERT**—Fairly hardy. The canes are tall and vigorous, and enormously productive. Berries very large, conical; rich crimson, very handsome, and so firm that they can be shipped hundreds of miles by rail without injury. Flavor rich, luscious, best, commences to ripen moderately early, and holds out until all others are gone.



**COLUMBIAN**—This is an enormously productive, very large purple berry, resembling the Schaffer but firmer; canes lighter red; a very rampant stout grower, canes often an inch in thickness and on good soil would easily grow ten feet in a season; propagates like the Schaffer, from tips. A valuable variety for home use or for canning factories.

**GOLDEN QUEEN**—The finest flavored of all the raspberries. In size, equal to Cuthbert; immensely productive; a very strong grower and hardy enough even for northern latitudes, having stood uninjured when the Cuthbert suffered. The desire for a yellow raspberry of high quality, combined with vigorous growth and perfect hardiness, is believed to be fully met in this variety.



**HIGHLAND HARDY**—Plants are very hardy; productive, and ripens the fruit very early; berry good size, bright red and sufficiently firm for shipping. Valuable for market.

**LOUDON**—This is one of the latest claimants for first place and from the opinions I have gathered from good authorities I judge it really is at the top, being very hardy, ranked at the Geneva Experimental Station as hardier than Schaffer, Columbian, Cuthbert, Royal Church, and most of the best sorts. "Rural New Yorker" says: "It is very hardy and the best red raspberry in existence." Size very large, equal to the largest Cuthbert; firmer even than Cuthbert; ripens about same time and is very productive; it would seem from all the evidence that there is no room for improvement; that the Loudon is perfection in its season.



**LOUDON**

**MARLBORO**—Large size, light crimson color; fair quality and firm. Plant vigorous and productive. The first berries ripen early, but the entire crop covers a period of four or five weeks in ripening. The most valuable early berry.

**MILLER**—This is one of the newest claimants for popular favor as an extra early berry; it seems to be hardy, is a fair grower and suckers very freely; is, however, with me no earlier than Marlboro or Highland Hardy and until I see more of it I do not care to recommend it as being any better.

**ROYAL CHURCH**—A new variety of large size and handsome appearance, and very productive. Commences to ripen early and continues late. Canes hardy and vigorous.





SHAFFER

**SHAFFER RASPBERRY**—This raspberry has scarcely received the justice it merits. It is the most productive raspberry I have tested, and I have tested most varieties of merit. Its color is against it for market. It is the same color as the Philadelphia; but for home use or growing for canning factories it is head and shoulders over other berries. It will produce more even than Philadelphia. The berries are about twice the size of Philadelphia and grow in clusters. Pickers can make good wages at 1c. per box, same as strawberries. The quality is the very best and it will make nearly half as many again pounds of preserved or canned fruit as Cuthbert from the same number of boxes, having so small a cavity. It is an extremely vigorous grower and should be planted seven or eight feet apart unless wired up. The canes, if allowed to grow, on good land, will reach a height of ten feet. It propagates like black caps, from tips. Here is what Mr. L. Woolverton, Editor

Canadian Horticulturist and Secretary Ontario Fruit Growers' Association, says of Shaffer in August number of Horticulturist, 1889: "The Shaffer is undoubtedly one of the most desirable raspberries for home use, for the following reasons: (1) It is an excellent bearer, continuing in season a long time. (2) The quality is excellent, and continues to improve as long as it hangs upon the bushes. For table use its flavor is peculiarly agreeable, and if left to hang until dark in color, and perfectly ripe, and served with sugar and cream, it is a most delicious dish. Those who have tried it in jams, pies, jellies, etc., say that it is unsurpassed. (3) It is very hardy, and is reported to have safely endured a temperature of 40 degrees below zero. (4) Its large size and ease of cultivation tend to make it a general favorite."

**THOMPSON'S EARLY**—This is one of the earliest, if not the earliest red raspberry, and is hardy, but not as large or productive as claimed at first, and berries crumble more or less.

**TURNER**—A beautiful red berry of excellent quality, below medium size, extremely hardy.

# BLACK RASPBERRIES.



**PALMER**

**P**REPARE the ground same as for red raspberries. In the Spring harrow and cultivate, mark crosswise with corn marker three feet apart, run a single furrow down the centre of the land, dig holes more than large enough to spread out the roots and six inches deep, fill up and pack with moist earth. Cultivate both ways as for corn, ridge up as soon as crop is gathered.

**PALMER**—A very early, very productive, and very hardy sort, ripening its crop up at two or three pickings early when the price is best; good medium size, good black color, of good quality. A very desirable early sort.

**CARPENTER'S EARLY**—This is a new variety, originated at Stony Creek, Ont., grown from seed, probably of Palmer; season is nearly a week earlier than any other black cap, even Palmer, and what is of especial importance it ripens the whole crop early when price is good; quality is excellent, size above medium, and as productive as any sort grown; possessing more points of excellence for early market than any other sort.

**CONRATH**—A very early, very hardy sort; firm and good shipper; very vigorous grower and exceedingly productive; berry of large size and handsome appearance; a decided acquisition to the list of early hardy black caps.

**GREGG**—Fruit very large, good quality, very meaty and firm, with heavy bloom; canes of very strong growth, needs rich soil and plenty of fertilizer to do well; very late, extending the season well into blackberry time. Not quite as hardy as we could wish.





**GAULT (Everbearing)**—A great novelty, producing a crop equal in size and quantity to Gregg at about the same time and then continuing to bear on YOUNG wood until killed by frost or about FOUR months altogether; it is a big, vigorous grower and altogether in the season yields an enormous quantity of fruit of first-rate quality and size.

**HILBORN (New Canadian)**—Fruit jet black large as Gregg and better flavor, strong grower, perfectly hardy few thorns, very productive, one of the most desirable of black caps and de-

cidedly the best second early known, very showy and brings the highest price in the market.

**HOPKINS**—A large, productive variety of real merit, strong grower, hardy, stands up well. I like it better than Gregg.

**JAPANESE RASPBERRY (Wineberry)**—Ornamental both in fruit and plant; canes covered with purplish red hairs; leaves dark green, silvery grey beneath; fruit in large clusters and each berry at first tightly enfolded by the large calyx forming a sort of burr which is covered with purplish red hairs; this gradually opens and turns back exposing a beautiful wine colored fruit of medium size; brisk sub-acid; retains flavor when cooked.

**LUCAS' IMPROVED**—A new sort that originated at Oakville, Ont., and liked there so well by the growers who know it that they will plant no other sort; season medium; berry very large; extremely productive.

**MILLS**—Another new sort of large size and medium season; regarded by many American growers as the most profitable market sort, on account of its productiveness, large size, and the strong upright growth of the bush.

**NEMAHA**—An excellent, large, late, black raspberry; hardier than Gregg and large like that well-known sort.

**OHIO**—An old variety of very vigorous, upright growth; very productive; berry very large; particularly liked by evaporators, producing, it is said, more pounds of dried product per acre than any other sort; mid-season.

**SOUHEGAN OR TYLER (Black)**—These varieties are so near alike that one description will answer for both. The best known early sort; ripens its entire crop within a very short period, a desirable feature when it precedes second early sorts, canes vigorous, strong and hardy, with a foliage healthy and free from rust, wonderfully productive; good size, jet black with little bloom, firm, flavor sweet, pleasant; valuable for market.



## BLACKBERRIES.

**P**LANT on strong, deep, rich land, heavily manured ; rows seven feet apart, three feet in the rows for field, prune as with raspberries ; form a hedge or tie to wire, cultivate shallow ; or may be planted in hills, six feet each way.

Blackberry plants are produced in two ways—one is by allowing the sprouts to grow up in the fruiting plantation and digging these up leaving a piece of the root of the mother plant attached, these make poor unsatisfactory plants and a large percentage fail to grow, leaving sad gaps in the field or plot and are dear as a gift ; these are offered by young concerns or cheap Jack concerns at low prices—and are dear in the long run. The other way is to propagate in the greenhouse the cuttings until started and then plant out of doors for one or two years, producing a plant with a fully developed system of fibrous roots, such plants under any decent care all live and are worth five times as much as the succors. Those I offer are grown by the latter method.



**ANCIENT BRITON**—This promising variety was brought from Wales some years since and has gradually risen in public estimation upon its own merits to the highest place as a profitable and valuable berry. The plant is very vigorous, healthy and extremely hardy, the fruit stems are large and profusely loaded with large, luscious berries.



AGAWAM—Ripens earlier than other kinds and has a flavor similar and equal to the wild berry. Perfectly hardy—one of the very best hardy sorts.



ERIE—Very large and very early, perfectly hardy, strong grower and great bearer.

EARLY CLUSTER—A fine berry, is very productive, but too tender unless protected by laying down

EARLY HARVEST—A fine, handsome berry, ripening before the other sorts, but unfortunately too tender unless laid down during the winter.

GAINOR—A fair sized hardy blackberry, originated at Welland, Ont.; productive.

KITTATINNY—Commences to ripen after Wilson's Early and continues longer in bearing, is ripe as soon as black, and much earlier; sweeter and better in all respects than the Lawton, which it resembles in plant and fruit. Not hardy enough except for the peach belt.

LAWTON—Fruit very large and black; tender outside the peach belt; an abundant bearer; resembles Erie, but not so hardy

LUCRETIA—One of the low-growing, trailing blackberries; in size and quality it equals



KITTATINNY

any of the tall-growing sorts. The plant is perfectly hardy, healthy and remarkably productive, with large, showy flowers. The fruit, which ripens early, is often 1 and 1½ inches long, by 1 inch in diameter, soft, sweet and luscious throughout, with no hard core; ripe before



LAWTON



late raspberries are gone. Should be mulched to keep berries from ground. We can highly recommend this variety.

**SNYDER**—Extremely hardy, enormously productive, medium size, no hard, sour core; half as many thorns as Lawton or Kittatinny, and they are short and nearly straight.

**STONE'S HARDY**—It is an upright and vigorous grower, wood is stocky, short jointed and ripens early, turns dark red and is very hardy. The berry, which is not large, is black and glossy when ripe and has a delicious flavor. It commences to ripen its fruit about five days later than the Snyder and continues bearing ten days longer.

**TAYLOR**—Fruit of the best quality, melting and without core, very productive and hardy.

**WACHUTETT'S THORNLESS**—A blackberry almost thornless of fair size and quality, but not so productive as some others.



**SNYDER.**



**WESTERN TRIUMPH.**

**WESTERN TRIUMPH**—No fruit is likely to maintain its price year after year with more certainty than the blackberry, as there is no fruit ripens at the same time except early peaches which are very often a failure, and moreover, the blackberry is such a luscious fruit that it is yearly in greater demand—Where one crate found a sale seven or eight years ago, now a dozen are sold. The great difficulty hitherto has been to get a blackberry at once productive, hardy, free from rust and of good size and appearance. The Kittatinny is of fine size and appearance and productive, but lacks hardiness and is easily affected by rust.

The Snyder is hardy, productive, free of rust, but berries are rather under size and the seeds are sometimes red, caused by imperfect fertilization. But here we have a berry, the Western Triumph, hardy, very productive, free of rust, strong, stalwart grower, not excessively thorny, berries jet black and of fair size, not as large as Kittatinny but larger than Snyder. If the berries were a little larger this would be a perfect berry, but as it is I feel no hesitation in recommending it as the best hardy blackberry, one that will pay well to plant wherever blackberries can be grown. This is no new thing, but has been tested for many years



in Ohio and for at least fifteen years here and at Burlington, Ont., and those who have planted it or seen it are planting more wherever plants can be had.

Jan. 7th, 1893, Bell Bros., of Burlington, enterprising and prosperous fruit growers, in speaking of the Western Triumph, say that it is the best blackberry they have seen yet, and that they have grown Snyder, Taylor and other popular hardy sorts. They claim for it great productiveness, iron-clad hardiness, good quality and appearance, and ability to endure extreme drought better than other heavy yielding sorts. Further, that it does not sucker excessively like some other sorts, but is easily kept in hills.

"Re Western Triumph Blackberry. I have been fruiting it for three years and find it the most profitable of any of the following kinds, Lawton, Kittatinny, Gainor and Snyder, for the following reasons: A sure cropper every year; last season extremely productive; a strong, vigorous grower, canes never failing to grow strong enough to bear a heavy crop without going down; perfectly hardy and proof against frost or winter killing; easy to cultivate from the fact that the canes grow perfectly straight and the arms extending not so rough as some other kinds; berry large and very fine flavor, ripening uniformly. Would recommend this variety to any one purposing planting this coming spring. Requires deep, moist, rich soils."

W. W. Ross, Fruit Grower, Aldershot.





# CURRANTS.



**T**HIS fruit comes partly with the raspberry, but follows it several weeks. Indeed, none of the small fruits will remain so long upon the bushes without injury as the currant. Set  $4\frac{1}{2}$  to 5 feet apart in rich ground, rows six feet apart; in large plots plant five feet each way and cultivate both ways with horse. Cultivate well or mulch heavily, prune out old wood so that each remaining shoot will have room to grow; if the currant worm appears dust with hellebore every three weeks; manure freely. The best soil for currants is a heavy loam, and no fruit crop is more easily handled. Unlike strawberries or raspberries, you can let them hang when ripe for a few days without loss.

**BLACK NAPLES**—The old reliable standard black currant, vigorous, productive, best on heavy soil.

**BLACK CHAMPION**—A new variety from England, more productive and fruit larger than Black Naples; season later than most sorts and hangs on extremely well; very profitable.

**BLACK VICTORIA**—A recent introduction from England. Berry of immense size, like small cherries; very productive bush and a very vigorous grower; season about with or a little before Black Champion.

**CHERRY (Red)**—Old and reliable, largest red currant except Fay's, which is about same size.

**COLLIN'S PROLIFIC**—New black currant, productive, strong, vigorous grower; currants very large size, good quality; among the earliest.

**FAY'S PROLIFIC (Red)**—Has been cultivated for some years alongside all the best and most popular old varieties and has sustained all claims made for it by the originator, being as large as cherry, berries more uniform, with larger stems and fruit less acid and far more productive; is the most popular red both for home use and for market.



**LEE'S PROLIFIC (Black)**—A variety not quite so vigorous as Black Naples but more suitable for sandy loam, fruit sweeter and generally better liked for jam or jelly.

**MOORE'S RUBY (Red)**—Vigorous, productive, medium size

**RABY CASTLE (Red)**—Is one of the most profitable of all for market on account of its exceeding great productiveness and fine healthy foliage, which remains on and protects the fruit, enabling growers to hold back and not be obliged to market in a glut ; medium size and good quality.

**VERSAILLES (Red)**—Clusters longer than Cherry, berries a little smaller, very productive. One of the most profitable red currants, in fact I think the most profitable, as it combines nearly the largest size with great productiveness and stands up straight and strong.

**VICTORIA**—Almost, if not quite, identical with Raby Castle.

**WHITE GRAPE**—The finest white currant, very productive ; I think the most productive of any color, sweeter than the reds, makes beautiful jelly, should be in every family garden.



## GOOSEBERRIES.



INDUSTRY.

**T**HIS FRUIT requires the same cultivation as the currant, heavy soil most suitable. A good method to prevent mildew is to mulch deeply, six or more inches with straw, tan bark, coal ashes, etc. Plantations thus treated have borne large crops for twenty years. The mulch retains moisture in the driest weather, the few weeds that push up are easily pulled, and the fruit is large and more evenly ripened. In mulching be sure the ground is under-drained, or it is worse than useless. Good cultivation is better than half mulching. Put it on thick. In a dry season the extra amount of fruit will doubly pay for the material used, not to speak of the saving of labor and cleanliness of the fruit. The demand is yearly increasing. The American varieties are very little subject to mildew. Do not dig deeply about the bushes when fruit is setting, shallow cultivation is better.



## ENGLISH VARIETIES.

The number of varieties of English Gooseberries is almost innumerable. The fruit is generally large and handsome. The best sorts are Industry, Crown Bob (red), and White Smith (greenish white), which in favorable localities do extremely well.

**AUTOCRAT**—Fruit dark green, oblong, large size about same as Queen ; luscious for eating out of hand when ripe ; vigorous, productive, not much mildew.

**CROWN BOB**—Fruit large, oblong, hairy, flavor first-class.

**CHATAUQUA**—An English Seedling of large size, greenish yellow, productive and valuable. About same size as Queen.

**INDUSTRY**—It is of vigorous, upright growth, larger cropper than any other known variety, one of the best for market purposes owing to the properties it possesses of flowering late and afterwards swelling so quickly as to reach a suitable size for pulling green sooner than any other variety ; if left to attain maturity it is a dark red color, hairy, with pleasant, rich flavor.

**QUEEN**—New English Seedling, fruit greenish white, oblong, size large—twelve berries weigh  $2\frac{1}{2}$  ounces ; vigorous and productive.

**WHITE SMITH**—Fruit large to very large, oblong, flavor good ; productive, fairly vigorous. One of the best.

## AMERICAN VARIETIES.

**CHAMPION**—Long slender wood, easy to pick, thorns weak, fruit oblong, greenish white, tremendously productive, very vigorous ; fit to use green two weeks before other varieties ; not much subject to mildew. Twelve berries weigh  $1\frac{1}{2}$  ounces.

**DOWNING**—Origin, Newburg, N.Y. ; fruit large, roundish, light green, with distinct veins, skin smooth, flesh rather soft, juicy and very good, vigorous and productive. Twelve berries weigh  $1\frac{3}{8}$  ounces.

**HOUGHTON'S SEEDLING**—A small sized American variety, bears abundant and regular crops, seldom mildews ; fruit smooth, red, tender and very good.

**PEARL**—An exceedingly productive variety, of good size and quality, in my opinion bound to supersede Houghton, Downing and Smith's Improved, being as free from mildew as any, as productive as Houghton and larger than Downing. Twelve berries weigh  $1\frac{3}{4}$  ounces.

**RED JACKET**—Fruit almost round, red, larger than Pearl or Downing ; very vigorous grower, which is a desirable trait ; does not mildew ; is productive.

**SMITH'S IMPROVED**—Large, oval, light green, with bloom ; flesh moderately firm, sweet and good ; vigorous grower.

**TRIUMPH**—An English Seedling ; golden yellow, form ovate ; hardy and an immense bearer ; very large size, twelve berries weigh 3 ounces ; fairly vigorous. Very promising.

**WHITE CRYSTAL**—Very similar to Champion. Does not mildew.

# Miscellaneous Fruit.



## MULBERRIES.

**T**HE mulberry is a very ornamental tree in garden or lawn, with its large, green, glossy foliage, and some newer varieties are worthy of general cultivation for their fruit alone.

**DOWNING'S EVERBEARING**—Produced from seeds of the *Multicaulis*; tree very vigorous and productive, continuing in bearing a long time; fruit  $1\frac{1}{4}$  inches long and  $\frac{3}{8}$  of an inch in diameter; color blue black; flesh juicy, rich, sugary, with sprightly vinous flavor.

**NEW AMERICAN**—Fruit of the largest size, black, delicious in flavor; an attractive lawn tree, with very large leaves, of rapid growth; hardy.

**RUSSIAN**—Fruit not so large as Downing or New American, but tree very much hardier, loads enormously; berries sweet and very pleasant to eat; tree grows vigorously. Well worth planting, even if fruit is gathered only by the birds who relish it immensely. When the birds are eating mulberries they will not be eating cherries.



## NECTARINES.

**T**HE nectarine requires the same culture and management as the peach, from which it differs only in having smooth skin like the plum. It is peculiarly liable to the attacks of the curculio. The same remedy must be applied as recommended for the plum. There are a number of varieties, the most popular is a variety called Boston, that ripens early in September.



## ASPARAGUS.

**T**O PREPARE a bed for this esculent so highly esteemed, thoroughly mix soil to a depth of nearly a foot with a good dressing of well-rotted manure, plant the rows four to six feet apart and the roots say a foot apart in the row. A dressing of salt occasionally improves the yield and quality. Cut whenever the young shoots get about six inches above the ground. Enormous quantities can be grown from an acre if the ground is kept rich, and highly remunerative results follow an intelligent management.

CONOVER'S COLOSSAL—This is generally recognized as much superior to the old varieties both in the early maturity and in the size of the plants and hence the yield per acre.

PALMETTO—An extra early variety, tender and juicy, and regarded as a worthy rival in every respect of Conover's Colossal.



## RHUBARB.

**A**N IMPROVED "PIE PLANT" too universally grown and used to require description. To succeed best requires plenty of rich manure, the more the merrier. Prodigious quantities are taken from very small areas when manure is supplied liberally. The best varieties are as follows :

EARLY SCARLET—Small but very early and good.

MYATT'S LINNEUS—Very large, early and fine and regarded as the best all round market sort:

GIANT—A very large productive sort of not quite as good quality as some others.

VICTORIA—A new sort, regarded by some of great value on account of its earliness and tender quality ; size medium.



# Ornamental Department.

## GENERAL REMARKS.

THE people in this country have scarcely begun to realize the commercial value of an investment of a few dollars judiciously expended in a few ornamental trees and plants to our homes.



Many of our active business men are also men of taste, and would be glad to beautify their grounds but are so occupied with business that they have neither the time nor disposition to find out what they want ; some competent man can generally be found to aid in the matter.

Windbreaks of trees, more especially if they are evergreen, make the dwelling-house warmer, diminishing to no inconsiderable extent the consumption of fuel ; they make the outbuildings warmer for stock by night and the yard by day, not only making the dumb animals comfortable, but thereby saving a large amount of food.



## HOW TO PLANT, ETC.

Grass and trees are always charming and need but little care. In laying out and planting have regard to economy of labor ; let there be as few walks as possible ; cut your flower beds (not many) in the turf, and don't make the lawn a checker board of trees and shrubs. Mass them in boundry lines or groups, leaving a broad expanse of green for the eyes to rest on.

If an unpleasant object is in sight conceal it by planting free-growing trees ; if there is a pretty view leave an opening.

While it is not well to have large trees near the house, there should be at least one by the sunny corner for summer shade.

Plant flowering shrubs and the smaller evergreens in circles or ovals, and twice as thick as they should stand when fully grown. This makes a show at once, and in two years or more you can take out one-half, leaving the rest to fill out the space, and obtaining a supply of finely rooted plants to set somewhere else.

Where the ground is wholly given up to trees and shrubs, it should be thoroughly prepared before planting. Keep the earth cultivated, and the shrubs and trees mulched the first two seasons, and then let the turf grow around them. Mow the grass frequently and top dress with fine manure every fall and winter.

Straggling growers, like the Forsythia and *Pyrus Japonica*, may be repeatedly pinched back during the growing season, to produce a compact form.

Weigelas and Deutzias should be pruned back each year to near the old wood.

A beautiful hedge can be made by intermingling different flowering shrubs, and clipping, or allowing them to grow naturally.

## HEDGES.

The idea of planting hedges for use and ornament, and screens for the protection of orchards, farms and gardens, is rapidly becoming appreciated. They serve not only as protection against the fierce winds but there is much less trouble from the blowing off of fruit. Some writers tell us the temperature is warmer in the vicinity of evergreens. However this may be, we know that our gardens are earlier and that our fruit ripens better when protected by such screens.

Nothing can be more beautiful than ornamental hedges well kept and pruned to serve as boundary lines between neighbors, or as divisions between the lawn and garden.

# DECIDUOUS TREES.

**AILANTHUS.** TREE OF HEAVEN—A lofty, rapid growing tree with long, elegant, feathery, pinnate foliage; exempt from all diseases and not attacked by insects; has a tropical appearance.

**ALDER** (*Alnus*). IMPERIAL CUT-LEAVED (*Laciniata Imperialis*)—A very striking and beautiful tree, with delicate and beautiful cut leaves; hardy and of vigorous growth. One of the finest cut-leaved trees in cultivation.

**BEECH** (*Fagus*). PURPLE-LEAVED (*Purpurea*)—A remarkable species with deep purple foliage, changing to greenish purple in the autumn. Very striking contrast with other ornamental trees. Attains a height of 40 to 50 feet and a breadth of 40 feet or more.

**BIRCH** (*Betula*). PURPLE-LEAVED (*Folis Purpuris*)—Very desirable novelty. With the habits of the birches it has beautiful purple foliage, as dark as that of the Purple Beech.

**PAPYRACEA** (Paper or Canoe Birch)—The bark of which is used in the unsettled districts for making the famous birch bark canoe. The white bark of this very hardy tree contrasts beautifully with evergreens, and is a handsome, thrifty tree at all times.

**CATALPA** (*Speciosa*)—A variety originating in the west; more upright and symmetrical in its growth than the common Catalpa and blossoms two or three weeks earlier. Very valuable for timber, fence posts, railroad ties, etc., possessing wonderful durability. Very ornamental and valuable tree. Does well only on sandy and gravelly soil.

**CORNUS.** FLORIDA (White-flowering Dogwood)—An American species of spreading, irregular form, growing from 16 to 25 feet high. The flowers produced in spring before the leaves appear are from 3 to 3½ inches in diameter, white and very showy. They begin to appear just as the magnolia flowers are fading and are invaluable for maintaining a succession of bloom in the garden border on the lawn. They are very durable, lasting in favorable weather more than two weeks.

**RED FLOWERING** (Florida Flore Rubro)—A variety of the well-known White Dogwood, but having a deep rosy pink colored flower. The leaves have a soft, velvety appearance and are of a darker green than the old variety. It makes a good, upright, bushy growth.

**ELM** (*Ulmus*). AMERICAN WHITE (*Americana*)—The noble, drooping, spreading tree of our own woods. One of the grandest of park or street trees.

**PURPLE**—A beautiful variety, leaves of rich purple color when young.

**CAMPESTRIS** (English Elm)—An erect, lofty tree of rapid growth, with smaller leaves and more regularly cut than those of the American Elm, and darker colored bark; the branches project from the trunk almost at right angles.

**MONTANA** (Scotch or Wych Elm)—A very strong, vigorous, rapid growing tree, with large leaves for an elm and most highly to be recommended for street or park planting. An avenue of full grown elms is one of nature's grandest pictures.

**GOLDEN CHAIN** (*Laburnum*)—A native of Europe; the name "Golden Chain" alludes to the length of the drooping racemes of yellow flowers which appear in June.



**HONEY LOCUST. THREE THORNED ACACIA** (*Gleditsia Triacanthos*)—A rapid growing tree; delicate foliage, of a beautiful, fresh, lively green and strong thorns. Makes an exceedingly handsome, impenetrable and valuable hedge.

**HORSE CHESTNUT** (*Æsculus*). **DOUBLE WHITE** (*Alba Flore Plena*)—A superb variety with large spikes of handsome, double flowers.

**COMMON OR WHITE FLOWERING** (*Hippocastanum*)—Very beautiful, well-known tree, with round dense head, dark green foliage and an abundance of showy flowers in early spring.

**RED FLOWERING** (*Rubicunda*)—Not so rapid a grower as the white; foliage of a deep green, and blooms late. A very showy tree, and makes a fine contrast when planted alternately with white flowering.

**JUDAS TREE** (*Cercis*) **Red Bud**—A small growing tree, covered with delicate purple flowers before the leaves appear.



EUROPEAN LARCH.

**LARCH** (*Larix*). **EUROPEAN** (*Europæa*)—An excellent, rapid growing, pyramidal tree; also valuable for timber. Small branches drooping. Half evergreen.

**LINDEN** (*Basswood*)—A fast growing tree with immense leaves. Valuable for bees, as the blossoms yield large quantities of honey; also as a shade tree, having such large umbrageous foliage. There are several varieties — Red-twigged European being the most in demand.

**MAPLE** (*Acer*). **WIER'S CUT - LEAVED** (*Laciniata*)—A silver maple with remarkable and beautiful dissected foliage; of rapid growth, shoots slender and drooping, giving it a very graceful appearance, should be in every collection.

**NORWAY** (*Platanoides*)—A distinct foreign variety, with large broad leaves of rich green. Probably the best maple in cultivation.

**SCHWEDLERII** (*Schwedler's Maple*)—Beautiful variety, with young shoots and leaves of bright purplish and crimson color, which changes to purplish green in older leaves; a great improvement on the *Colchicum Rubrum*, foliage being much brighter and growth more vigorous.

**SILVER-LEAVED** (*Dasycarpum*)—Of rapid growth and desirable for immediate effect; will thrive in wet soil where hard maple will not. This is a native of America and very hardy and desirable.

**SUGAR OR ROCK** (*Saccharium*)—Very popular American tree, and for its stately form and fine foliage justly ranks among the best, both for lawn and avenue.

**MAIDEN HAIR OR GINGKO** (*Salisburea*)—A remarkable tree from Japan, combining in its habits characteristics of coniferous and deciduous trees; it grows to a medium size but rapidly; has beautiful fern-like foliage.

**MAGNOLIA. ACUMINATA**—A beautiful pyramidal growing tree that attains a height of sixty or ninety feet ; leaves six to nine inches long, bluish green color ; flowers yellow tinted with bluish purple ; fruit, when green, resembles a cucumber.

**SOULANGEANA**—One of the best of the Hybrid Chinese Magnolias ; grows to medium size ; is one of the hardiest of its class ; has cup-shaped flowers, three to five inches in diameter.

**CONSPICUA**—Another of the Chinese class, of shrubby growth ; flowers large and pure white, very numerous and appear early before the leaves ; this, like all the magnolias, is one of the most beautiful of trees.

**MOUNTAIN ASH (Sorbus Acuparia). EUROPEAN**—A fine hardy tree, head dense and regular, covered from July to winter with large clusters of bright scarlet berries.

**OAK-LEAVED (Quercifolia)**—A variety with large hoary lobed leaves, distinct and fine ; grows to a height of 20 to 30 feet. One of the most useful hardy ornamental trees.

**CUT-LEAVED (Sorbus Macrophylla Lacineata)**—A cut-leaved variety of recent introduction ; a vigorous grower and promising sort.

**PEACH (Amygdalus). DOUBLE WHITE**—Very ornamental, flowers pure white and double, hardy.

**VARIOUS COLORED**—The most singular of the flowering trees, flowers variously white and red and variegated on the trees at the same time, flowers early, hardy.

**PURPUREA (Blood-Leaved)**—Leaves are of a deep purple in the spring.

**DOUBLE FLOWERING**—One of the most handsome ornamental trees when in bloom, being a mass of large double peach colored blossoms.

**POPLAR. FASTIGIATA (Lombardy)**—Very distinct, well-known variety, of rapid growth and tall narrow form, reaching a height of 100 feet and over.

**CAROLINA**—Similar to Lombardy, but does not sucker so much, and grows even faster ; has large leaves of a glossy appearance.

**PLUM. PURPLE-LEAVED (Prunus Pissardii)**—A tree growing about the same size as an ordinary plum tree and thriving under similar conditions ; foliage, however, of a rich purple color which makes the tree highly attractive.

**THORN (Cratægus). DOUBLE WHITE**—Has small, double white flowers, and very profuse in blossoms which appear in May.

**DOUBLE SCARLET**—Fine variety, flowers deep crimson, with scarlet shade ; very double and considerably larger than the double red ; fine rich foliage.

**TULIP TREE OR WHITEWOOD (Tulipifera)**—A magnificent native tree of tall pyramidal habit with broad glossy fiddle-shaped leaves of light green color and handsome tulip like flowers ; should be transplanted when trees are small.

**WHITE FRINGE (Chioanthus Virginica)**—A small native tree with large glossy leaves and drooping racemes of pure white flowers having narrow fringe like petals ; blossoms in May or June.



## NUT TREES.



**CHESTNUT. AMERICAN**  
(*Castanea*) — A stately tree, well-known in many parts of Canada ; produces small nuts but of choice quality ; a grove of these on suitable soil would yield a very large revenue; the soil requires to be loamy or sandy and dry to a considerable depth to secure the best results.

**SPANISH (Vesca)**—Originally from Asia Minor ; a very handsome lawn tree ; produces much larger fruit than the American but not of so choice a quality.

**JAPAN (Japonica)**—Similar to Spanish, producing very large fruit also.

**WALNUT (Juglans). BLACK OR COMMON**—A very strong growing tree ; attains an immense size ; requires rich deep dry land ; wood is very valuable ; the extending branches of a tree grown in the open often measures 60 to 80 feet across ; bears enormous quantities of nuts.

**ENGLISH (Regia)**—Not quite so hardy as American or Black Walnut but is hardy in the peach belt, and the nuts are preferable being thin shelled and fuller of meat.

**WHITE OR BUTTERNUT (Cinera)**—A native tree of spreading growth when grown in the open ; nuts oval-shaped and rough and about the same size as walnuts ; loads heavily ; grows admirably on a rocky hillside ; flourishes near the top of the Helderleigh escarpment in the rear of the nurseries, and 300 feet higher.

# WEEPING DECIDUOUS TREES.



CAMPERDOWN WEEPING ELM.

**BIRCH.** CUT-LEAVED WEEPING (*Pendula Lacineata*)—Beyond question one of the most popular of all weeping or pendulous trees. Its tall, slender, yet vigorous growth, graceful drooping branches, silvery-white bark, and delicately cut foliage, present a combination of attractive characteristics rarely met with in a single tree.

**YOUNG'S WEEPING BIRCH** (*Pendula Youngii*)—When grafted on stems five to six feet high, it forms beautiful pendulous heads, and its slender shoots droop gracefully to the ground.

**ELM** (*Ulmus*). **PENDULA** (Camperdown)—Its vigorous, irregular branches which have a uniform weeping habit, overlap so regularly that a compact, roof-like head is formed; the finest weeping tree.



**MOUNTAIN ASH. WEeping EUROPEAN**—A beautiful variety of rapid growth and decidedly pendulous and trailing habit. One of the most desirable lawn trees.

**MULBERRY. TEAS WEeping**—A very thrifty, vigorous grower, perfectly hardy, forming a natural umbrella-shaped top, or head, foliage handsome. New and valuable.

**WILLOW (Salix). KILMARNOCK WEeping (Caprea Pendula)**—An exceedingly graceful tree, with large, glossy leaves ; one of the finest of this class of trees ; very hardy.

**AMERICAN WEeping**—A very handsome tree, with delicate feathery like foliage on innumerable slender weeping branches.

**BABYLONICA**—Our common and well-known weeping willow, that grows so rapidly and attains such a large size.



**KILMARNOCK WEeping WILLOW**

# EVERGREENS.



ARBOR VITÆ, SIBERIAN.

**ARBOR VITÆ. SIBERIAN** (*Siberica*)—The best of all the cedars for Canada, being exceedingly hardy and keeps its color well all winter; grows compact and strong; stands shearing well and is suitable alike for hedges, lawns, or for clumps.

**AMERICAN** (*Thuja Occidentalis*)—This plant is, all things considered, the finest evergreen; valuable for hedges; is very hardy and easily transplanted, few or no plants ever failing if nursery specimens are obtained; grows rapidly and with little care, or rather by easy management, it soon forms a beautiful hedge, very dense, and perfectly impervious to the sight. Of course it is not adapted to turn stock, but forms a most ornamental screen to divide the lawn from other parts of the ground, or for any other purpose.

**GOLDEN** (*Secidentalis*)—Dense foliage, tipped with a golden color; is one of the handsomest evergreens for hedges or single specimens; does not grow rapidly and does not attain a great size, hence for many purposes is desirable on this account in addition to its beautiful appearance.

**PYRAMIDALIS**—This is a strikingly beautiful tree planted singly or in pairs, stretching up to a great height, a pyramid of solid green; grows in shape like a church spire.

**GLOBE-HEADED** (*Globosa*)—This is one of the most desirable of evergreens; forms a very dense round head and grows strong and thrifty; of a dark green color.

**EVER GOLDEN** (*Semper Aurea*)—A variety of the Chinese; nearly spherical in form; of dwarf habit but free growth; retains its golden tint the year round; one of the best variegated evergreens but not sufficiently hardy except for Southern Ontario.

**JUNIPER. IRISH** (*Hibernica*)—A distinct and beautiful variety, of erect, dense conical outline, resembling a pillar of green; very desirable.

**SWEDISH** (*Suecica*)—A small sized pyramidal tree of handsome outline with yellowish green foliage; quite hardy.

**VIRGINIANA** (*Red Cedar*)—A fine ornamental hedge tree; quite common in some parts of the United States.

**VIRGINIANA GLAUCA** (*Red Glaucus Cedar*)—A compact conical form of red cedar having silvery foliage, rendering it distinct and attractive.



IRISH JUNIPER.



- JAPAN—A dwarf, dense, bushy evergreen from China and Japan, having light, lively green foliage.
- CYPRESS. LAWSON'S—A magnificent weeping evergreen of dark green color ; unfortunately only half hardy when young ; possibly with protection for a few years it might become hardy with age.
- FIR—BALSAM—A very erect pyramidal tree of regular form with dark green foliage ; grows rapidly and is very hardy.
- NORDMAN'S SILVER—This is a majestic specimen from the Crimea ; is of symmetrical form, vigorous and hardy ; considered here and in Europe as one of the finest evergreen trees.
- PINE (Pinus). AUSTRIAN OR BLACK (Nigricans)—A remarkably robust, hardy, spreading tree ; leaves long, stiff and dark green ; growth rapid, valuable for this country.
- SCOTCH (Sylvestris)—A fine, robust, rapidly growing tree, with stout, erect shoots and silvery green foliage.
- WHITE (Strobus)—The most ornamental of our native pines ; foliage light or silvery green ; flourishes in the poorest soils.
- SIBERIAN (Cembro)—A hardy moderate growing evergreen of the pine family and worthy of a place in a collection of pines.
- RHODODENDRON. ROSEBAY—The Rhododendrons are magnificent flowering evergreen shrubs. All prefer a peaty soil and a somewhat shaded situation. The Catawbiense varieties are the most hardy, and succeed in our climate better than any other. In this latitude they require to be protected in winter.
- SPRUCE (Abies). NORWAY (Excelsa)—A lofty, elegant tree, of perfect pyramidal habit, remarkably rich ; and as it gets aged has fine, graceful pendulous branches ; is exceedingly picturesque and beautiful ; very popular and should be largely planted ; one of the best evergreens for hedges.
- COLORADO BLUE (Pungens)—Known for a time under the following names : *Abies Menziesii*, *Abies Menziesii Parryana* and *Abies Engelmanni*. One of the hardiest and most beautiful of all the spruces ; in form and habit similar to the White Spruce ; foliage of a rich blue or sage color ; an important acquisition.
- WEeping SPRUCE (Abies Inverta)—A pendulous variety of Norway Spruce with large bright foliage ; the lateral branches droop like a willow ; this is, indeed, a rare and beautiful novelty and should be in every collection.

# DECIDUOUS SHRUBS.

- ALTHEA OR ROSE OF SHARON**—These are fine shrubs and especially valuable because of their flowering in the fall when other shrubs are out of bloom ; hardy and easy of cultivation ; grow upright and shapely without trimming.
- BOULE DE FEU**—Fine new variety of vigorous growth ; flowers large, double, and of beautiful violet red color.
- DOUBLE PURPLE** (*Purpurea Flore Pleno*)—Very showy kind ; flowers double purple ; exceptionally fine.
- VARIEGATED LEAVED** (*Variegatis Flore Pleno*)—White flowers with purple outside ; petals shaded pink, foliage finely variegated. Sometimes called "Painted Lady."
- BERBERRY. PURPLE-LEAVED** (*Berberis Purpurea*)—An interesting and beautiful variety, with violet-purple leaves and fruit ; hardy and easy to grow, and very ornamental either on the lawn or as a hedge.
- CURRENT (Ribes). CRIMSON FLOWERING** (*Sanguineum*)—Small deep flowers, blooming abundantly and early in spring.
- YELLOW FLOWERING** (*Aureum*)—Bright shining leaves and yellow flowers.
- CALYCANTHUS OR SWEET-SCENTED SHRUB**—The wood of this shrub is fragrant.
- DEUTZIA. ROUGH-LEAVED** (*Scabra*)—One of the most beautiful profuse flowering shrubs, white.
- PRIDE OF ROCHESTER**—A variety raised from *Deutzia Crenata Flore Pleno*, and producing large double white flowers ; the back of the petals being slightly tinged with rose. It excels all of the older sorts in size of flower, length of panicle, profuseness of bloom and vigorous habit ; blooms nearly a week earlier than *Deutzia Crenata Flore Pleno*.
- CRENATA FLORE PLENO**—One of the most desirable of the Deutzias, flowers double, white tinged with rose.
- CANDIDISSIMA** (Double white flowering)—One of the finest shrubs, producing snow-white flowers of great beauty, and valuable for bouquets and baskets.
- DOGWOOD (Cornus). MASCULA** (*Cornelian Cherry*)—Bright yellow flowers, which appear in May before the leaves ; grows to a height of 20 ft.
- MASCULA VARIEGATA**—Leaves striped with pale yellow or white, very beautiful ; otherwise similar to *Mascula*.
- RED-BRANCHED** (*Sanguinea*)—Very conspicuous and ornamental in winter on account of its blood-red bark ; does not grow to be a tree.
- SANGUINEA ELEGANTISSIMA** (*Variegata*)—A variegated-leaved species of the red-twigged ; the leaves are broadly margined with white and in some cases entirely white.
- SPÆTHII AUREA**—Similar to the last named except that the variegation is yellow instead of white ; one of the finest ornamental shrubs.
- ELEGANTISSIMA AUREA TRI-COLOR**—A new sort of the red-twigged with handsome tri-colored foliage ; a rare acquisition to the list of variegated-leaved shrubs.



**EXOCHORDA (Grandiflora)**—From North China ; a fine shrub, producing large white flowers in May when it is one of the most showy shrubs in existence ; a strong grower and hardy.

**ELDER (Sambucus). AUREA OR GOLDEN ELDER**—Is the most striking of the elders ; the strong yellow foliage, which is retained all summer, the rapid and vigorous growth, freedom from any disease, and ease of propagation, make this a desirable and effective shrub where a striking effect is wanted in colors ; like all elders, however, do not plant near tile drains as the roots will soon fill them up.

**ELEAGNUS LONGIPES**—A handsome, shapely, silver-leaved shrub with ornamental red brown bark ; hardy and easy to grow ; bright yellow flowers in June on long stalks, but the chief beauty of this shrub is in the orange-red fruit which is produced in profusion along the whole length of the branches.



**HYDRANGEA PANICULATA GRANDIFLORA**

**EUONYMUS (Europæus). STRAWBERRY TREE**—A very ornamental and showy shrub, whose chief beauty consists in its brilliant berries, which hang in clusters from the branches until mid-winter ; berries rose-colored ; planted with a background of evergreens the effect of contrast is very fine.

**BURNING BUSH (Atro Purpureus)**—A tall growing shrub with larger leaves than *Europæus*, turning to scarlet in autumn ; fruit dark red.

**FORSYTHIA. GOLDEN BELL. FORTUNE'S**—This is the one most commonly grown and is a strong shrub covered in early spring with yellow flowers before the leaves appear ; should be pruned down close to make a compact head as its habit is straggling ; a native of China and Japan.

**HYDRANGEA. LARGE CLUSTERED (Paniculata Grandiflora)**—Fine large shrub, bearing showy panicles of pink and white flowers in the greatest profusion. It is quite hardy, and is altogether a most admirable shrub for planting singly or on a lawn in masses.



**HYDRANGEA OTAKSA**—Foliage a beautiful deep green color. The plant produces immense trusses of rose-colored flowers in profusion in July; free blooming. Tender for out of doors in winter.

**HALSEA OR SILVER BELL. TETRAPTERA OR COMMON SNOWDROP**—A very beautiful and graceful shrub with small, bell-shaped flowers in May, followed by four-winged fruit from one to two inches long.

**HONEYSUCKLE, UPRIGHT. RED TARTARIAN**—A well-known shrub, flowers bright pink, which appear in May.

**WHITE TARTARIAN**—Like the preceding, but has creamy white flowers, which are fragrant.

**LILAC (Syringa). COMMON PURPLE**—Too well-known to require description there would be a great blank, however, in the ornamental grounds if there were no lilacs, they are perhaps the most universally satisfactory shrubs grown.

**WHITE PERSIAN**—A fine sort; white flowers, delicately tinted with rose color.

**LARGE FLOWERING WHITE**—A beautiful variety; has very large, pure white panicles of flowers. Considered the best.

**COMMON WHITE**—Similar to Common Purple except in the color of the flowers.

**PERSIAN**—A native of Persia; foliage small as compared to common lilac; flowers bright purple; grows four to six feet high.

**PLUM. PRUNUS TRILOBA (Double Flowering Plum)**—An interesting addition to hardy shrubs, flowers semi-double, of a delicate pink, upwards of an inch in diameter, thickly set on the long slender branches; native of China; hardy.

**PURPLE FRINGE. SMOKE TREE (Rhus Cotinus)**—A very much admired and conspicuous shrub or small tree, with spreading habit, so as to require considerable space; covered in mid-summer with a profusion of dusky, fringe-like flowers, desirable for its striking peculiarity of flowering.

**PRIVET**—The Privet in all of its varieties, deserves attention as an ornamental plant. It is almost an evergreen, and grows freely on all soils; is compact and regular in form, and bears shearing to any extent. Makes an excellent hedge.

**QUINCE. JAPAN (Cydonia Japonica). SCARLET**—An old and esteemed variety, having a profusion of bright scarlet flowers in early spring, and one of the best early shrubs we have; makes a beautiful and useful hedge.

**SPIRÆA**—The Spiræas are all elegant, low shrubs, of the easiest culture, and their blooming extends over a period of three months.

**LANCE-LEAVED (Reevesii)**—A charming shrub with narrow pointed leaves and large clusters of white flowers that adorn the bush a few days later than Van Houtte; about June 1st.

**BUMALDA**—A new Spirea from Japan; dwarfish habit; foliage, narrow; flowers, rose-colored, in great profusion during summer and autumn.

**THUMBERGII**—Of dwarf roundish habit; slender, graceful, drooping habit; flowers small, white; very early in bloom, being one of the first of the Spireas; extremely neat and pretty.

**ARGUTA**—Of dwarfish habit; flowers white; one of the best sorts and the first to flower in early May.

**BILLARDII**—Rose-colored spikes differing altogether in appearance from Van Houtte and others of that class; blooms nearly all summer; is hardy and attractive.

**CALLOSA ROSEA (Fortune's Rose-Colored Spirea)**—Has large panicles of deep rosy blossoms; grows strong and blossoms nearly all summer.



**PRUNIFOLIA FLORE PLENO**—A beautiful Japanese sort with pure white flowers in May ; keeps in flower a long time and justly merits a front place among the Spiræas.

**AUREA** (Golden Spirea)—A variety with distinct yellow foliage and double white flowers in June ; highly ornamental and pleasing in appearance.



SPIRÆA VAN HOUTTEI

**VAN HOUTTI**—One of the most charming and beautiful of the Spiræas, having pure white flowers in clusters or panicles about an inch in diameter, astonishingly profuse in bloom, and plants remarkably vigorous and hardy. But lately introduced from France, and there is no more desirable flowering shrub in cultivation. Flowers last of May.

**SYRINGA. MOCK ORANGE**—(Philadelphus)—All the species and varieties of the Syringa have white flowers, many of them quite fragrant. They are vigorous, hardy shrubs, flowering in June, just after the Weigelas.

**GOLDEN-LEAVED**—A very pretty plant of medium size with golden-yellow foliage. It retains its color the entire season, and is valuable for creating pleasing and striking contrasts with both green and purple-leaved shrubs.

**LARGE FLOWERED**—A conspicuous, showy kind, with large flowers and irregular branches. Will grow to be 10 or 12 feet high if untrimmed.

#### VIBURNUM (Opulus Sterilis)

**COMMON SNOW BALL OR GUILDER ROSE**—A well-known favorite shrub, large size, with globular clusters of white flowers latter end of May.

**PLICATUM**—A rare and exceedingly beautiful species from Japan. Flowers pure white in June. Moderate growth ; handsome, plicated foliage. One of the most popular and desirable shrubs grown.

**WHITE FRINGE** (Chicanthus Virginica)—A pretty, distinct, and showy shrub or small tree, having beautiful glossy foliage and delicate fringe-like flowers.



JAPAN SNOWBALL.

**WEIGELA (Rosea).** ROSE-COLORED—An elegant shrub with fine rose-colored flowers, introduced from China by Mr. Fortune and considered one of the best plants he has discovered ; hardy, blooms in early June ; grows to be a large shrub, 10 feet across and the same in height.

**VARIEGATED-LEAVED**—Of dwarf habit, and possessing clearly defined, silvery variegated leaves ; flowers nearly white. It stands the sun well, and is one of the best dwarf variegated-leaved shrubs.

**CANDIDA**—A strong, robust grower like Rosea but having pure white flowers that are in the most luxurious profusion and endure from the beginning of June to autumn ; a really very valuable addition to the list of hardy, robust shrubs and should be in every collection.





## CLIMBING SHRUBS.

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**AKEBIA. QUINATA**—A singular Japanese climbing shrub, with fine foliage, purple flowers and ornamental fruit.

**AMPELOPSIS. VEITCHII**—Miniature foliaged creeper, which clings to the smoothest brick walls perfectly without any support whatever; leaves glossy green shaded with purple, hardy and colors finely in autumn; grows slowly at first but when once established soon covers the side of house with a perfect overlapping covering of shining foliage. The finest new thing introduced for many a year, we must thank the Japanese for it.

**VIRGINIA CREEPER (Quinquifolia)**—A native vine of rapid growth with large luxuriant foliage, which in autumn assumes the most magnificent coloring. The blossoms, which are inconspicuous, are succeeded by handsome dark blue berries. The vine is best calculated to take the place in this country of the celebrated English Ivy.

**ARISTOLOCHIO SYPHO (Dutchman's Pipe)**—A native climbing shrub that grows rapidly and has very large, thick leaves and yellowish green flowers resembling a pipe in form.

**BIGNONIA OR TRUMPET FLOWER. SCARLET**—Splendid climber, vigorous and hardy, with clusters of large trumpet-shaped flowers in August.

**LARGE FLOWERED**—A magnificent vine with large flowers, very showy.

**HONEYSUCKLE (Lonicera Flava). YELLOW TRUMPET**—Well-known variety, yellow trumpet-like flowers.

**SCARLET TRUMPET (Semper Virens)**—This and its varieties are the handsomest in cultivation; a strong, rapid grower and produces scarlet, inodorous flowers all summer.

**HALL'S JAPAN**—A strong, vigorous, almost evergreen sort, with pure white flowers, changing to yellow. Very fragrant, and covered with flowers from July to December; holds its leaves till January. The best bloomer of all.

**BELGICA (Monthly Fragrant)**—Very fragrant red and yellow flowers; blooms all summer; a hardy and well-known sort.

**JAPONICA (Chinese Twining)**—This is a hardy, fast growing sort, holding foliage well into the winter; blooms in July and September and is very fragrant.

**IVY HIBERNICA OR IRISH IVY**—An evergreen climbing plant that thrives here if planted on the north side of the buildings; as the ivies are about the only evergreen climbers they are very desirable where hardy; they do well here.

**WISTARIA (Sinensis). CHINESE**—Beautiful climber of rapid growth, producing long pendulous clusters of pale blue flowers. When well established makes an enormous growth; very hardy, and one of the most superb vines in cultivation; flowers in May and June and in autumn.

**DOUBLE PURPLE (Flore Pleno)**—A rare and charming variety with double flowers, deeper in color than the single, and with racemes of remarkable length; plant hardy, resembling the Chinese, so well-known as one of our best climbing plants.

**CHINESE WHITE (Sinensis Alba)**—Introduced from China by Mr. Fortune; flowers pure white. This is regarded as one of the finest things introduced from the Celestial Empire.





CLEMATIS JACKMANNI.



## CLEMATIS.

**H**ARDY climbing plants with gorgeous flowers of nearly every shade. Many of the flowers are from 4 to 7 or 8 inches in diameter, growing rapidly and flowering profusely. All the varieties delight in deep, rich soil and a sunny exposure, and need supports to which they should be fastened as they advance. They are well adapted to covering unsightly objects, and are used to advantage about rock-work; are the most popular ornamental plants; are benefitted by having the roots mulched during winter with any coarse material, such as manure, etc.

### The following flower on shoots of the present season's growth :

**ALEXANDRA**—Of the Jackmanni type; flowers reddish violet and very strong grower; one of the most satisfactory sorts to grow.

**COCCINEA**—A handsome, hardy sort, bearing thick bell-shaped flowers of a bright coral red color; blooms with wonderful profusion from June until frost.

**FLAMMULA OR EUROPEAN SWEET CLEMATIS**—This has small white fragrant flowers.

**HYBRIDA SIEBALDII**—Has large, bright blue flowers and is a very satisfactory sort.

**HENRYII**—Very large, creamy white flowers, one of the best; a perpetual bloomer.

**JACKMANNI**—Perhaps the best known of the newer fine perpetual clematis and should have credit for the great success now attending this family of beautiful climbers. Plant is free in its form of growth and an abundant and successful bloomer, producing flowers until frozen up. Flowers are large, an intense violet purple, remarkable for its velvety richness. Though raised in 1862—since which time many new varieties have been introduced—it has no superior and very few, if any, equals. July to October.

**LOUIS VAN HOUTTE**—A strikingly showy variety, with bluish purple flowers. First-class certificate Royal Horticultural Society.

**MADAME VAN HOUTTE**—New white variety, flowers remarkably fine in size and quality. July to October.

**MADAME EDOUARD ANDRE**—This is the nearest approach to a bright red clematis and has been called the Crimson Jackmanni; the vine grows vigorously and blooms profusely; color crimson red and quite distinct from any of the older sorts.

**PANICULATA**—A native of Japan; this is regarded as one of the most valuable sorts for general culture, for, although the flowers are small, they are pure white and fragrant, vine very vigorous and hardy and soon covers a porch or verandah, and is one mass of bloom from August until frost comes.

**RAMONA**—This new clematis originated at Newark, N. Y. It is a strong, rampant grower, very much stronger than Jackmanni, often growing ten to twelve feet the first season. It is a true perpetual bloomer, flowers appearing on the last year's growth and on the new shoots, giving an abundance of bloom all through the season. In size the flower surpasses any of the old sorts, often six to seven inches in diameter and of the most perfect shape. Color, deep rich lavender. Distinct from any other sort and very attractive. Perfectly hardy and remarkably vigorous.

**VITICELLA RUBRA GRANDIFLORA**—This is a crimson clematis with medium sized flowers in profusion. The flowers, which are very abundant, are of a dull crimson color, and have green stamens. July to October.

**VITICELLA KERMESINA**—Flowers of medium size, wine color; very profuse bloomer; a strong, free grower.

The following varieties flower in spring and early summer, from the old or ripened wood of the previous year's growth:

**ALBERT VICTOR**—This is one of the early flowering hybrids, having large flowers of a deep lavender, with a pale bar in the centre of each sepal. The flowers are produced freely from the last of May to the first of July.

**DUCHESS OF TECK**—A pure white, with a faint, delicate mauve bar. Awarded first class certificate by the Royal Botanic Society.

**FAIR ROSOMOND**—Free growing and handsome. The flower is fully six inches across, and consists of eight sepals. The color is white with a bluish cast, having a light wine red bar up the centre of each sepal. Flowers very fragrant, and are abundant through June and first of July.

## DOUBLE SORTS.

**DUCHESS OF EDINBURGH**—Without doubt the best of pure whites; flowers of medium size; deliciously scented.

**EXCELSIOR**—A distinct double-flowered sort, flowers about 9 inches across, of a grayish purple or deep mauve color marked with a plum-colored bar; the outer flower leaves of the same color as the large ones. It is a first-class certificate variety.

**JOHN GOULD VEITCH**—Sent from Japan in 1862. Flowers very handsome, large, double and light blue or lavender color; is like Fortune except in color of flowers. June and July.



# ROSES.

## HYBRID PERPETUAL OR HYBRID REMONTANT.



1 **TREE ROSE IN BLOOM.**

**H**YBRID or Remontant Roses are free and constant bloomers, of all shades of colors from very dark to white. To obtain most satisfactory results should be planted in rich, deep, well-drained soil and severely pruned in spring before buds start. In severe winters some varieties freeze down if unprotected. An excellent plan to winter successfully is to knock out the heads of old nail kegs and slip one over each bush just before winter and fill the keg with fine earth. In the spring early take off the keg and prune off all wood above the keg—which would be about the right height to prune a rose bush. In this way roses can be grown anywhere, and what is there to equal the rose in beauty?

**AMERICAN BEAUTY**—Deep rose color, globular shape, delicious perfume, very free flowering.

**ANNE DE DIESBACH** (Glory of France)—Raised from La Reine. Carmine, a beautiful shade; very large. A superior garden sort; fragrant; one of the hardiest. Valuable for forcing.

**ALFRED COLOMB**—Bright carmine red, clear color, large, deeply built form, exceedingly fine and very fragrant.

**BARON DE BONSTETTEN**—Rich maroon, large, splendid sort, though shy bloomer in autumn.

**BARONNE PREVOST**—Deep rose, large and full, vigorous grower, abundant bloomer, one of the oldest and finest of this class.

**CHARLES LEFEBVRE**—Rich, velvety, shaded crimson, thick petals, flowers of great substance and perfect form, imbricated. One of the very best.



**CHARLES MARGOTTEN**—Reddish crimson, semi-cupped, very large, full and sweet ; reddish wood with occasional red spines ; foliage slightly crimped.

**COQUETTE DES ALPES**—White, slightly shaded with carmine ; medium size ; form semi-cupped ; wood long-jointed ; larger flowers than the others. This is not a true Remontant but a Hybrid Noisette.

**DR. ANDRY**—Bright red, shaded crimson, full, beautiful cup-shaped form, a grand rose.

**DUKE OF EDINBURGH**—Rich, velvety crimson, large, full and well formed ; an excellent rose.

**FRANCOIS MICHELON**—A lovely silvery rose, large, deep petalled and truly magnificent.

**FISHER HOLMES**—Rich purple crimson, large, double and fine cupped form, superb.

**GENERAL WASHINGTON**—Brilliant rosy crimson, large and double, fine.

**GENERAL JACQUEMINOT**—Brilliant crimson scarlet, very showy and effective ; one of the oldest and still most popular of roses.

**GIANT OF BATTLES**—Very deep, brilliant crimson centre, dwarf habit, free bloomer and one of the very best.

**JEAN LIABAUD**—Crimson maroon, illumined with scarlet ; large, beautiful, dark rose.

**JOHN STUART MILL**—Bright clear red, thick petal, fine form.

**JOHN HOPPER**—Rose, with rosy crimson centre, splendid form, very vigorous and hardy.

**LA HAVRE**—Vermillion red, not large, but full, and perfection in shape. A good lasting flower.

**LOUIS VAN HOUTTE**—Beautiful maroon, medium size, full, of fine shape, deliciously perfumed. One of the best, but not so easy to grow as some others.



PAUL NEYRON

**LA REINE**—Bright rosy pink, very large, double and sweet, one of the best.

**MADAM GABRIEL LUIZET**—Pink, distinct, very large, cup-shaped ; somewhat fragrant. As an exhibition rose, will rank with its rival, Baroness Rothschild.

**MADAM PLANTIER**—Pure white, above medium size, full, one of the best white roses for hedges ; extremely vigorous.

**MAGNA CHARTA**—Pink suffused with carmine, full globular.

**MABEL MORRISON**—A sport from Baroness Rothschild. Flesh white, in autumn tinged with rose ; double, cup-shaped flowers, freely produced. In all save substance of petal and color, is

identical with Baroness Rothschild. Though not so full in flower as we would like it, it is the best white Hybrid Perpetual raised.



**MADAME VICTOR VERDIER**—Bright cherry rose, large, compact and finely cupped, blooms in clusters, a free bloomer.

**MARSHALL P. WILDER**—Cherry carmine, continues in bloom long after other varieties are out of flower, the finest H. P. rose yet produced.

**MRS. JOHN LAING**—A seedling from Francois Michelin; soft pink; large and of fine form, produced on strong stems; exceedingly fragrant; one of the most valuable varieties for forcing, and flowers continuously in the open ground. The most beautiful rose of recent introduction.

**MARGARET DICKSON**—White with pale flesh centre; petals very large and shell-shaped; fragrant and a most desirable sort.

**PAUL NEYRON**—Deep rose color, good foliage, by far the largest variety in cultivation.

**PRINCE CAMILLE DE ROHAN**—Deep velvety crimson maroon, large, moderately full, splendid rose.



Prince Camille de Rohan Rose.



ULRICH BRUNNER.

**BARONESS ROTHSCHILD**—Light pink, cup-formed; not fragrant; very hardy; a late bloomer; very distinct and beautiful; one of the finest for exhibition purposes.

**COUNTESS DE SERENYE**—Silvery pink, often mottled; form globular; medium size; slightly fragrant; requires a little extra care but deserves it; blooms later than most other sorts.

**ULRICH BRUNNER**—Brilliant cherry red; flowers of fine form and finish; plant vigorous and hardy; one of the best of the roses of recent introduction.



## CLIMBING PRAIRIE ROSES.

(*ROSA RUBIFOLIA*)

These are admirably adapted for covering walls, trellises, old trees, unsightly buildings, etc. Their rapid growth, perfect hardiness, luxuriant foliage, immense clusters of beautiful flowers, commend them at once to every one. Flowers are produced in large clusters late in the summer when most other varieties are gone.

**BALTIMORE BELLE**—Fine white with blush centre, very full and double.

**GEM OF THE PRAIRIE**—A hybrid between the Queen of the Prairie and Madam Laffay. It is a strong and vigorous grower, similar in habit to the Queen, but the flowers are considerably darker in color, besides being quite fragrant.

**QUEEN OF THE PRAIRIE**—Bright rose color, large, compact and globular; a very profuse bloomer. One of the best.

## HYBRID CLIMBING ROSES.

**JULES MARGOTTEN**—Carmine rose; fine in open flower and bud but not sufficiently rampant to cover a house, makes a fine pillar rose; by close pruning may be kept in bush form.

**CLIMBING VICTOR VERDIER**—Carmine rose color and very pretty for pillars.

## CLIMBING POLYANTHUS ROSES.

**AGLAIA OR YELLOW RAMBLER**—Somewhat similar to the Crimson Rambler except in the color of the flowers which are bright yellow. From the experience of the past season it would appear to be fairly hardy and worthy of a place in the list of climbing roses.

**CRIMSON RAMBLER**—Bright crimson; flowers produced in large trusses of pyramidal form, often 80 to 100 roses in a truss. The individual roses are small but they are so compact in the truss that it has the appearance at a little distance of one huge rose, perhaps a foot in diameter. It grows with wonderful vigor, often ten feet in a season. It has proven to be quite hardy and will supersede as a strong climber many of the older sorts.

**POLYANTHUS GRANDIFLORA**—Pure white; a very hardy and vigorous climber; splendid for pillars or porches.

**THALIA OR WHITE RAMBLER**—Flowers pure white; a splendid strong climber, and with the Crimson and Yellow Ramblers, makes a trio that is highly decorative and interesting.



## AUSTRIAN OR YELLOW ROSES.

These should not be pruned closely like Hybrid Remontants. The flowers are produced from the terminal shoots of last season's wood ; the pruning should consist in removing the weakly shoots chiefly. They are quite hardy and seldom suffer any injury from winter and bloom with the most wonderful profusion. A good way to keep the bushes of nearly uniform size with the Hybrid Remontants, that are annually cut back, is to have more than one of the Austrian roses and cut back half of them each year and the other half the next.

**HARRISON'S YELLOW**—Golden Yellow, medium size, semi-double ; a very prolific bloomer.

**PERSIAN YELLOW**—Bright yellow ; nearly full ; small size but very hardy and very profuse of bloom.

## MOSS ROSES.

(*ROSA CEUTIFOLIA MUSCOSA*)



This is a class of roses always in great demand for their beautiful buds for button-hole bouquets, etc. They require close pruning and high cultivation and are among the hardiest of roses ; being difficult to propagate they are mostly grown by budding. Planters should be careful to keep all sprouts cut off that spring from below or close to the ground.

**ÆTNA**—Bright crimson, very double, superb.

**BLANCHE MOREAU**—Pure white, large full, and of perfect form ; flowers produced in clusters, and freely furnished with a deep green moss. A valuable variety. Blooming in the autumn.

**COUNTESS DE MURINAIS**—White ; very large and double ; free flowering.

**CRESTED NOSS**—Rosy pink, paler edges, well mossed, a large flower ; very fragrant. One of the most beautiful of the moss roses.

**PERPETUAL WHITE**—Pure white, blossoms in large clusters, very mossy.

**SALET**—Clear rose color, double, vigorous growth, abundant bloom, perpetual.

**WHITE BATH**—Pure white ; a very beautiful sort in the bud form.



## ROSES, HYBRID TEA-SCENTED.

These are amongst the most beautiful of all roses, some of them such as La France and Kaiserin Augusta standing at the top of the list. They are not quite so hardy, as a class, as the true Hybrid Perpetuals, but if protected as described in this catalogue can be safely wintered, and are so beautiful it is certainly worth the small trouble.

**CAPT. CHRISTY**—Delicate fleshy white with slightly darker centre; very large and full; splendid foliage.

**DUCHESS OF ALBANY**—Very similar to La France but of a darker color; sometimes called Red La France; a charming sort indeed, and one that should not be omitted from any large collection.

**KAISERIN AUGUSTA VICTORIA**—Cream color, slightly shaded to lemon, deeper in the centre; habit vigorous. One of the grandest roses ever offered to the public.

**LA FRANCE**—Beautiful silvery rose color with pale lilac shading; extra large, full, and of fine form; one of the sweetest scented, most free blooming, and delightful of all roses.

**METEOR**—Rich, dark, velvety crimson, retaining its color well; a constant bloomer.

**VISCOUNTESS FOLKESTONE**—Creamy pink, centre almost salmon pink; large, very free flowering, and early bloomer.

**WHITE LADY**—Creamy white; an excellent show variety; quite distinct in appearance; a very effective rose.

## NOISETTE AND TEA ROSES.

These may well be taken as synonyms for all that is delicately beautiful. What refinement of color, what subdued yet powerful fragrance do they possess! They may justly be called the sweetest of all roses. The flowers, many of them, are large and very delicate in their shades of colors, such as white, straw, salmon and various tints of rose combined with these. While as a rule they are inferior to the Hybrid Perpetuals in brilliancy of color and fullness of flower the distinction between varieties is equally marked, and for bouquets and cut flowers they greatly excel all other classes. Like other tender roses their flowers improve in quality as the season advances and reaches perfection in autumn. In judging the merits of a Tea Rose we do not always consider fullness of flowers a requisite. A Hybrid Perpetual is nothing if not at least moderately full, but some of our most valued teas have but very few petals, and are comparatively single. Such are Bon Silene, Isabella Sprunt, Safrano, etc. All these have exquisitely formed buds, and are therefore prized as invaluable. The teas are more tender than any of the other classes, and need a little more care in their protection.





Marechal Niel Rose.

**GLOIRE DE DIJON**—Color a combination of salmon, orange and buff; flowers very large, and of good globular form; hardy.

**ISABELLA SPRUNT**—Sulphur Yellow; very beautiful in the bud. A sport from Safrano, which variety it greatly resembles in every particular save the color of the flower.



Sunset Rose.

**BRIDE**—A sport from Catharine Mermet. Pure white, large, fine form, very fragrant, free bloomer, admirably adapted for forcing.

**BON SILENE OR SILENE**—Rosy carmine, shaded with salmon; fragrant and very free flowering. Valuable for the buds.

**BRIDESMAID**—Clear, bright pink; a lovely color; identical with its parent Catharine Mermet excepting in color, being much higher and brighter.

**CATHARINE MERMET**—Bright flesh color, with the same peculiar silvery lustre possessed by La France; large, full, and of beautiful form; when the flowers expand they yield a delightful perfume; decidedly one of the finest Teas; cultivated extensively by florists for cut flowers.

**MARECHAL NIEL**—Deep yellow, very large, full and globular, and highly perfumed. This still heads the list of yellow roses. It is not of robust constitution and requires careful treatment, which however it well repays.

**MADAM HOSTE**—Large, finely formed flowers on stout stems; color varies from straw white to canary yellow; vigorous and most abundant bloomer; forces well. Already has taken a prominent place among first-class varieties.

**MADAME BRAVY**—White, centre flushed with pale pink; large and full; of most exquisite form.

**NIPHETOS**—White, sometimes tinged slightly with yellow; long pointed buds; a most exquisite variety under glass but not suitable for out of doors.

**PAPA GONTIER**—Rose shaded yellow, reverse of petals crimson; large, semi-double, fragrant, free growing, profuse flowering; very popular for winter forcing.

**PERLE DES JARDINS**—A beautiful straw-color, sometimes deep canary; very large, full, and of fine form; stiff shoots or stems, and very free flowering. The most popular yellow rose for forcing.



**SAFRANO**—Saffron and apricot ; a very free bloomer. One of the oldest varieties, and in the bud state scarcely to be surpassed.

**SUNSET**—A sport from *Perle des Jardins*. Identical in every respect with that variety except that its color, instead of being a canary yellow, is of a rich tawny shade of saffron and orange, similar but deeper than *Safrano* or *Mme. Falcot*. In size, vigor and productiveness it is in all respects the same as the variety from which it sprung.



*Kaiserin Augusta Victoria*



## HEDGE PLANTS.

**H**EDGES are required for four distinct purposes—ornamental, screens, windbreaks, and for turning stock. Different plants suit different purposes. I submit the following :

For ornament there is no finer hedge nor one more hardy and useful all round than one of Siberian Arbor Vitæ. It is compact and dense, and of a splendid rich green color all the year. Next to this among evergreens, in my opinion, is American Arbor Vitæ. Any of the Arbor Vitæs will stand close shearing, so that one can keep the hedge to any desired height or width, or shape. Of course if one can afford the cost, a hedge of Hovey's Golden Arbor Vitæ would eclipse anything else, but the cost debars most people from planting this most elegant evergreen for hedge purposes. Norway Spruce makes an excellent evergreen hedge, especially if frequently pruned and allowed to grow to a height of six feet or more and a width of four or more feet. It will not bear as close shearing as the Arbor Vitæ and retain its solid green sides. Among deciduous shrubs Spirea stands among the best. For a short time when in flower there is nothing to equal a hedge of Spirea Van Houtte and for the balance of the season the hedge looks almost as well as any deciduous shrub. Privet grows rapidly and will stand close shearing and makes a living wall of green without any gaps as it is so easy to grow and it holds its leaves well into winter. Japan Quince is highly ornamental and also somewhat defensive. When in flower it presents a most striking and handsome appearance and during the balance of the season is also quite ornamental with its scarlet-tipped shoots. Purple Berberry makes a highly ornamental hedge, retaining its purple foliage all summer. Golden Syringa makes a very solid hedge of a golden color, that retains its hue with slightly decreasing richness all through the summer.

### FOR SHELTER OR SCREENS.

Norway Spruce is, perhaps, at the very top of the list. It can be sheared and grown as a solid hedge ten, twenty, and thirty feet high, and of any desired width in proportion, by planting about four feet apart ; or for shelter by planting a double or triple row alternating the trees and spaces and planting, say fifteen feet apart. Scotch, Austrian, and White Pine all make grand evergreens for windbreaks if left to grow at their own sweet will. These should be planted at from ten to thirty feet apart as desired. They grow very rapidly, and being always green, relieve the landscape in winter from its sameness and afford a wonderful amount of protection for many purposes. They make the house warmer if planted thickly on the windward side and save fuel. They keep the cattle and other live stock warmer if planted thickly to the windward side of the stock barns and save food, and windbreaks at intervals on the farm prevent devastating winds from sweeping the fields bare and causing the loss or ruin of the wheat and clover crops. Formerly when strips of woodland preserved the snow upon the intervening fields we grew great crops of wheat and clover and if we ever expect to do so again we must plant shelter belts. Another very quick growing tree though



not evergreen is the Lombardy Poplar, and another very similar is the Carolina Poplar. It is a good plan to plant a row or two of these on the windward side of the shelter belt, planting the balance of evergreen trees. The poplars grow so rapidly and so tall.

## DEFENCE HEDGES.

Buckthorn and Honey Locust are the most useful in this country, being hardy and thorny and quick growers. Osage Orange is equally good but not quite so hardy. It does well in Southern Ontario however. In order to make a good hedge the land should be prepared thoroughly as though a heavy crop of fall wheat were to be grown; then if planted early and upon a ridge say eight feet wide with a good deep furrow on each side, or better still, a small ditch, and the ground kept well cultivated and hoed alongside of the plants for a couple of years a good even hedge may be expected, but if put in sod or on poor or undrained land or not cared for after planting, of course one must expect losses and gaps in the hedge which are unsightly and unprofitable.

## PÆONIES.

PÆONIA MOUTAN OR TREE PÆONIES—A native of China. There are a number of varieties and they increase in size for a number of years reaching a height of five to ten feet according to care and culture. They are moderately hardy but do better if protected in winter by wrapping the trunks in straw. They are well worth some care, for what could be more striking than such a tree covered with huge double flowers six to nine inches across of gorgeous colors of almost any desired shade from pure white to purple? And in the month of May before our wealth of roses and other summer flowers appear.

## HERBACEOUS PÆONIES.

These do not grow into a tree form but spring annually from the root. They are hardy as possible and can be grown in any part of the country with ease and certainty. All the attention they require is to be planted in a good rich soil not suffering with undue wet and hoed like one would hoe and care for a hill of corn or potatoes, and they will produce finer results than the same expenditure in almost anything in the long list of beautiful shrubs and flowers. Their vigor, hardiness, and great natural green, thrifty, healthy appearance and freedom from disease of any kind to say nothing of the gorgeous show of magnificent double flowers that rival the rose in brilliancy and delicacy of color and double it in size, makes it, it seems to me, one of the most desirable things offered by a nurseryman for the general family flower garden. There are now a long list of varieties covering a long season commencing in the middle of May and lasting until nearly the end of July. The European sorts bloom in May, the Chinese through June and July. There are so many varieties I will not attempt to enumerate them here but they are of all shades of color, like the tree pæonies, from pure white to dark crimson and purple including many of the yellow and straw-colored shades, and in ordering it would be well to state the colors desired and the class, whether European or Chinese, remembering that the latter bloom after the former.



## LILY (*Lilium*).

**T**HESE require a good mellow soil. In the open ground they should be planted five inches deep, in as warm a situation as possible. Nothing can exceed the beauty of this well-known flower. They should be planted in clumps of six to eight, and preferably in the fall of the year.

**AURATUM** (Golden-Leaved Japan Lily)—This superb lily has flowers eight to ten inches across; petals white studded with chocolate crimson spots and a bright gold band through the centre of each petal; highly perfumed; very prodigal of bloom and adapted for pot culture or out of doors in drained soil.

**CANDIDUM**—The well-known white garden lily.

**LANCIFOLIUM RUBRUM**—Rose-colored spotted with crimson.

**TIGRINUM** (Tiger Lily)—Orange salmon with dark spots; succeeds well anywhere.

**HARRISII** (Bermuda Easter Lily)—Bears large trumpet-shaped flowers; sheds an exquisite perfume; is a very free bloomer and is a very desirable sort, indeed one of the best, for either out of doors or for pot culture.

**JAPONICUM LONGIFLORUM** (Easter Lily)—Snow white; highly perfumed; a grand sort.

**SUPERBUM**—A strong, thrifty grower and a native and one of the finest of the lilies; bears yellowish red flowers and blooms in the early part of July.

**SPECIOSUM RUBRUM**—White, spotted beautifully with red, flowers in August; one of the most vigorous and reliable varieties.

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## IRIS.

(**KEAMPFERI**, JAPAN IRIS)

**T**HE Iris thrives best on low swampy ground but if this is not convenient then the plants should be plentifully supplied with water. The flowers are produced profusely and are of immense size, six to eight inches across, and of the most beautiful and delicate shades; flower in June and July. There are a number of varieties of various shades, from white shaded with violet to deep indigo blue. There are frequently locations near at hand that are unused on account of wet where a bed of Iris may be planted and become a source of infinite pleasure and satisfaction.

# POLINTHES TUBEROSA

(DOUBLE TUBEROSE)

ONE of the choicest summer flowering bulbs. The flowers are white, very fragrant and produced on Spikes two to four feet high ; indispensable for making bouquets. Plant about first of May.



## GLADIOLUS.

THERE are few flowers that produce such a gorgeous effect as this magnificent autumn-flowering plant. Largely as they are used, and popular as they undoubtedly are, they deserve to be still more extensively grown. The great wealth and variety of color, the richness of their markings, the size of the flowers and the profusion of bloom, all combine to make them one of the most effective plants for the garden, either for massing or for growing as single specimens.

CULTURE—Gladiolus are of the easiest culture. The bulbs may be planted any time from the middle of May up to the end of June. They will grow well in ordinary garden soil with almost no care whatever. The bulbs may be taken up in the fall and stored during the winter in a dry cellar away from frost.

VARIETIES—The number of varieties is almost innumerable, hundreds of new sorts being introduced each year, in some cases improvements on many of the older sorts. I offer a good assortment of the best kinds.



## DAHLIAS.

THE dahlia is the grandest autumn flower we have. Nothing is its equal in any respect in September and October. It is in its glory when everything else has faded or is fading, and surrenders only to the Frost King. Put dahlia tubers in the ground when the season becomes warm, covering the neck some three inches. If many shoots start, thin them out. After



flowering and before hard frosts, take up the plants, remove the tops, dry the bulbs a little, and put in the cellar until spring, when they can be divided and replanted. Look at them occasionally to see that they are not shrivelling from too dry an atmosphere, nor starting the eye early in consequence of too much moisture and warmth. As the dahlia is a fall flower, there is no need of planting before the middle of May, or even later.

VARIETIES—They are divided into Pompon or bouquet dahlias, having small, perfect shaped double flowers, fine for bouquets. Large double-flowered, single-flowering and cactus dahlias—a host of varieties. I have over fifty named sorts that are regarded as the choicest sorts, and of all colors from white to dark purple. In ordering please name the class and color, and I will give you of the best varieties.

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## TULIPS.

**T**HE tulip is dashing and showy, and of the most brilliant and varied coloring. Nothing affords more satisfaction or is more dazzling than a bed of tulips. They are divided into two general classes, the Early and Late, and those again into others as Single, Double, and Parrot. The Early and Late Show Tulips embrace both the Single and Double varieties, and are excellent for house culture as well as for beds or border in the garden. The Parrot Tulips are exceedingly brilliant; the petals are long, loose and fragrant. Most varieties have three or four colors, as crimson, yellow, orange, and green. The effect of mingling such bright colors is very striking. Plant tulips in October or November, in deep, rich soil, from five to six inches apart, and cover three to four inches deep.

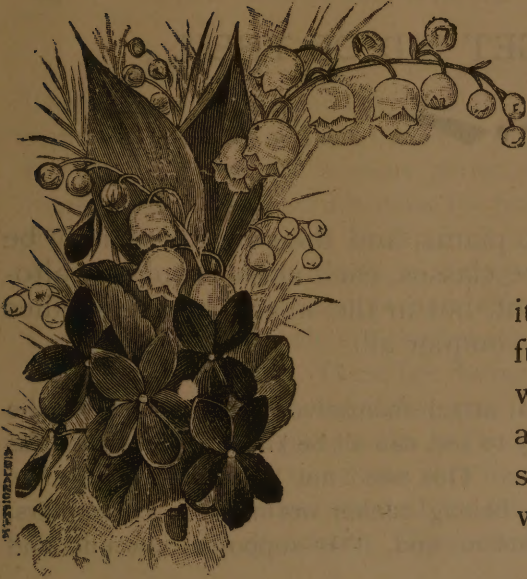
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## NARCISSUS.

**M**OST of the varieties are hardy, and should be planted like Hyacinths. They are both single and double, and show every shade of color from pure white to deep orange. The Polyanthus Narcissus is not quite hardy enough for this climate, unless planted in sandy soil and well covered before winter. It is best, however, for house culture in pots or may be grown in vases of water like the Hyacinth. The flowers are produced in trusses of from half a dozen to three times that number. For fall planting only.

# LILY OF THE VALLEY.

(CONVALLARIA MAJALIS)



ONE of the most charming spring flowering plants, producing in profusion its delicate bell-shaped delightfully fragrant white flowers. It will thrive in any common soil, and will do well in shady situations where few other plants will succeed.

## HYACINTHS.

THE most beautiful, fragrant and popular of the bulbous plants, either for house or garden culture. For house culture they may be planted in pots singly, or in groups of different colors. Fill the pot with sandy, porous soil and plant the bulb so that the surface is just exposed; water freely and set away in a dark, cool cellar for several weeks. By removing a few at a time to a warm room, a succession can be kept up. When I speak of a warm room for bulbs, I mean a temperature of 70 degrees or less, and not running up to 75 or 80 degrees. They may also be grown in water in vases, the bulb not quite touching the water. For the garden, plant in October or November. If beds are small and near together, fill each with separate color; in large beds plant an assortment of colors. Plant three or four inches below the surface of the soil. Hyacinths are divided into early and late, single and double varieties. The colors are dark blue, deep blue, light blue, pure white, rosy white, red, rose and yellow.



# Some of the Worst Pests of the Fruit Grower.

## AND HOW TO GET RID OF THEM.

**T**HE enemies of fruit trees, plants, and their products, may be briefly divided into three classes, each class requiring altogether different treatment, but in the main, three remedies only being necessary to conquer all.

**1st**—There are those insects that attach themselves to the foliage or the bud; insects that eat. These, it is easy to see, can all be killed by poison unless they are prevalent when the fruit is ripe. This need not be if proper care has been exercised before. To this class belong canker-worms, tent caterpillars, pear tree slugs, flea beetles, currant worms, and, it is supposed, curculio and codling moth or their larvae.

**2nd**—The second class consists of insects that secure their food by imbibition or sucking through a tube the juice of the bark or leaf. These cannot be attacked by poison successfully but by some application upon their backs that will suffocate them by filling up their breathing tubes. To this class belong aphis and bark lice.

**3rd**—The third division consists of fungi, or plants, that are propagated from germs that float in the air, attach themselves to plants, and grow there, sending down roots into the tissue of the wood, leaves or fruit, and finally mature, then sending off in their turn countless millions of germs, many of them, attached in turn to other plants or trees. Unlike insects, however, these germs alight only by chance on a favorable location to grow. Probably not one in a million ever germinates else they would ruin everything vulnerable to their attack in a single season. This is, however, the worst pest of the fruit grower, at present, in its various forms of black-knot, apple and pear scab, curl leaf, leaf blights, mildew, rot, etc., but it would seem to be quite as easy, if not easier to combat than the insect enemies, if concerted action be taken by the whole people. The remedy is chiefly blue vitrol and sulphate of copper, in various compounds.

Besides these three divisions that may be treated chiefly by three remedies there are borers that will be treated of in their proper place.

Bearing in mind these chief divisions it will be much easier to arrive at proper remedies.

## APPLES.

**F**IRST in importance of the fruits and most vigorously attacked by enemies of which the following are the chief, in fact the only ones of importance.

**1st. BARK LICE**—These sometimes infest young trees and sap their vitality. They belong to the second division and can only be killed by the application of something directly on their bodies to smother them. As they are covered by a hard scale except for a short period when young, it is necessary to apply the remedy then, which occurs about the first of June and from that to the middle of the month. A thorough washing of the young twigs and branches when the young lice are hatched with a strong solution of soft soap and washing soda, though a tedious operation, is most effective, and if an orchard is once cleared of them they will not likely ever bother it again as they do not move rapidly from one place to another. These lice during most of the year when covered by a scale have the appearance of tiny gray specks on the bark, but the young, when hatched from under these scales in June and spreading over the young branches are almost too small to be seen with the naked eye. Another remedy is a solution of washing soda alone sprayed on the trees from June 1st to June 15th, giving them a thorough drenching. Ten pounds of washing soda to the barrel of water.

**2nd. SAN JOSE SCALE**—This is a new and much dreaded pest. In its habits and methods of propagation resembles bark lice described in the preceding paragraph. The mature scale is clearly discernable with the naked eye though the young lice are hardly visible except with a glass. The great danger lies in the wonderful rapidity of increase, one scale it is claimed multiplying in a single season to 3,000,000,000. There is no doubt, however, but that much more fuss has been made over the terrible destructiveness of this pest than its history warrants. Of course if allowed a foothold it will mean more expense for every fruit grower and every one who grows shade trees, and this expense in the aggregate would amount to many hundreds of thousands of dollars annually, which may be avoided if the pest is eradicated at once. It must not be supposed, however, that it is going to sweep of the fruit orchards like a hurricane. It can be fought and kept in check just like other pests. I doubt if it will be more difficult to fight than potato beetles though it may be more costly, perhaps, when it has secured a foothold. Whale oil soap, 2 lbs. per gallon of water, is an expensive mixture but it will kill all scales that are soaked with it. The professors at Cornell have cleaned up numbers of badly infested trees with this mixture. Pure coal oil will kill it also but this will burn the foliage and must be used only in the winter season and just in sufficient quantities to soak the tree and no more. Hyrdocyanic acid gas will also kill the scale where the tree is confined in a tent. Orchards are treated with this gas in California very effectually and cheaply considering the large orchards and large trees treated, but it is to be hoped we shall



never have enough of the scale here to make it profitable to employ this expensive method. The San Jose Scale attacks all kinds of deciduous trees, fruit and forest trees, and bushes.

**3rd. APPLE TREE BORER**—This pest as well as the bark lice mentioned before give little trouble where orchards are well nourished and cultivated and are growing healthy and strong. The borer is the larvae of a beetle that deposits its eggs on the bark of the tree near the ground in the latter part of June or early part of July. As soon as the egg is hatched the young larvae or grub bores through the bark and lives upon the young growth under the bark excavating channels that, of course, saps the vigor of the tree. The presence of these vermin can be detected by the saw-dust castings near the ground, or by the shrunk and blackened appearance of the bark in patches, underneath which the borer has been working. If not disturbed these borers live three years in the tree and if several are in one tree may easily kill it. To get these borers out is needful at once and it can be best done with a knife and a piece of wire, cutting away the dead bark until the grub is found. But prevention is better than cure and if the trunks are washed annually in the latter part of May before the parent beetle lays her eggs and after the spring rains are mostly over, with a thick paint made of soft soap and a strong solution of washing soda, the parent beetle will not lay her eggs there as this is distasteful to her. It is cheap and easy to apply, and, to make a sure job, had better be repeated at the end of June. The material is not wasted as the later rains wash it to the roots of the trees and it is the best fertilizer that can be applied.

**4th. CANKER WORM**—This pest in some places has been allowed to do great injury by the gross carelessness of owners of orchards. This is the worm that drops by a thread from the tree if jarred and travels by looping up the body and then stretching out the fore-part. They are called "loopers" by some. As the females have no wings and are obliged to crawl up the tree to deposit their eggs, it would seem reasonable that the place to catch them is on going up the tree, hence, many devices for that purpose, such as rings of some sticky substance, inverted circlets of different kinds, felt, tin, etc., have been tried. My experience is that all this bother is unnecessary as the same spraying that is necessary to kill codling moth and to prevent scab, will, if properly done, be quite sufficient to exterminate these leaf-eaters as well as the larvae of the tent caterpillar, that later in the season build their web tents on the branches and defoliate the trees. In fact the one remedy cures many troubles. If trees are properly sprayed for codling moth and scab no leaf-eating insects need be feared to cause any trouble.

**5th. CODLING MOTH**—This is doubtless the greatest curse of the apple grower though the scab is a worthy rival. In order to know how best to fight a pest we must know something of its history. That of the codling moth is as follows: The moth, which is rather a pretty creature, is described as follows:—About half an inch long, fore-wings marked with alternate irregular, transverse, wavy streaks of ash-gray and brown, and have on the inner hind angle a large, tawny, brown spot with streaks of light bronze or copper color nearly in the form of a horseshoe. At a little distance they resemble watered silk. The hind wings and abdomen are of a light yellowish brown with the lustre of satin (Saunders). This moth deposits an egg usually in the blossom.



end of the young apple immediately after the blossom falls, though it is now claimed by some of the leading entomologists that the egg is most frequently laid on the cheek of the apple, in fact that the beetle is quite careless of the location, but that as soon as the egg is hatched the larvae crawls to the blossom end at once for covering and protection, hence the prime necessity of very early spraying and very thorough spraying as well so as to be sure to have some poison deposited in the blossom of the apple before the calyx is closed up. In about a week the egg hatches and the larvae bores its way to the heart of the apple and when full grown, which takes about three to four weeks, bores its way out by the side of the apple and makes for some shelter to hide under for about two or three weeks. If the apple has fallen, as it likely has, before the worm emerges, it hides under the first available piece of bark or board. If the apple has not yet fallen it makes for the trunk of the tree and gets under some loose bark. Hence we may readily see here is its most vulnerable point, and here a favorable opportunity to attack it, because if left alone it hatches into a parent moth in a couple of weeks and proceeds at once to lay about fifty eggs in fifty different apples, which by this time have attained the size of large marbles or walnuts, and infinitely more damage is done than by the first brood not only on account of the greater number of moths but because these apples in which the second brood is hatched will draw a large amount of nourishment from the tree before they fall, and, in fact, so reduce the amount of sound fruit as to render the crop unprofitable; whereas in most cases the number affected by the first brood would still leave plenty of apples for a crop. The most popular remedy at present is spraying with a solution of three ounces of paris green in a barrel of forty-five gallons of water kept constantly stirred so that the paris green does not settle to the bottom and cause the liquid in the bottom of the barrel to be too strong and to burn the foliage which is too frequently the case though quite needless. To make a sure job and with the least worry a pump should be got having an agitator attached that stirs the water constantly when pumping. There is no danger whatever to the foliage if the mixture is kept well stirred. To make it perfectly safe add three or four pounds of quick lime thoroughly dissolved and strained, to a barrel, and this will prevent any danger of burning, but now the paris green is seldom used alone. The Bordeaux mixture is put on for scab and the paris green is put into the Bordeaux mixture, so that both the fungi and the eating insects are treated at the same time. When either lime is used or the paris green put into the Bordeaux mixture more may be used, usually about one ounce for each ten gallons of water. This spraying should be done just when the last blossoms are falling and repeated at intervals of ten to twelve days; in all, three times; or, if the weather is rainy, oftener. It is somewhat of a question in my mind, however, if this spraying is sufficient to keep in check the codling moth. Some years I have thought I could see a remarkable difference between orchards sprayed and those unsprayed and attributed the freedom from worms to the spraying. At other times I have sprayed my own orchard thoroughly and still found the apples horribly wormy. I must confess I can hardly see how or where the paris green comes in contact with anything the larvae eats. It is true when the egg hatches the larvae is exceedingly tender and when it commences to bore its way into the apple if it gets the most infinitesimal amount of the poison it would destroy it and doubtless many do get killed at this point, but as the blossom end of the apple is protected it seems to me that the poison would not likely get into the point where the larvae would get it very surely. Cer-



tainly if the spraying is to be effectual it must be done thoroughly and a sufficient quantity applied to soak or run down into the cavity at the blossom end; hence the necessity also of spraying before the apples drop over and hang with the blossom ends down as they do when they increase in size. It would then, I feel sure, be quite impossible to get the poison in the blossom end. However, the consensus of opinion is that spraying does good and it certainly does some, even if not effectual, and destroys many leaf pests such as canker worm, tent caterpillar, and others of less importance, and, withal, is not expensive. I have more faith in hogs and sheep. These, if kept in the orchard in sufficient quantities every year to eat up fallen apples and supplemented by tying rough bandages around the trees under which the first brood of larvae would congregate if loose bark and other hiding places are kept cleaned up, and which bandages can be examined and the larvae killed every ten days, will effectually rid an orchard of the codling moth, especially if one's neighbors can be persuaded to do the same.

**6th. APHIS**—This is a pest that has greater powers of increase than any other of the insect enemies of fruit and belongs to the second division or sucking tribe. Aphides are small green or black lice that congregate on the underside of the leaves of apples, plums, cherries, and occasionally other fruit trees, and multiply with frightful rapidity and if it were not for the numerous insect enemies that live upon them would over-run the earth in a few years. They are hatched from shiny black eggs deposited in autumn upon the limbs of trees and make their first appearance as warm weather arrives when the young leaves are expanding. The aphids hatched from these eggs commence to lay young in two weeks and lay an average of two daily, and these, in two weeks more, commence the same multiplying process until in a short time nearly all the young leaves are covered on the under-side with them if the weather is warm and their enemies not numerous. Later in the season millions are destroyed by lady-bugs and other friendly insects that do more for our benefit in this way than we do ourselves. These aphides suck the young leaves of all vitality and unless checked so weakens the tree that it is of no use for fruit bearing and in some cases kill the tree entirely. They can only be attacked by an application on their backs and it is found the most effectual remedies are the Kerosene Emulsion and tobacco juice. If tobacco stems can be procured in sufficient quantity, the juice made by steeping these stems in water is not only effectual in killing the aphids but is not injurious in any way to the leaves. The Kerosene Emulsion is effectual but must be made exactly by the prescription. If coal oil comes in contact with the foliage it destroys it if not mixed with the soap to neutralize it. For formula of Kerosene Emulsion see page 116. This is applied by a powerful spray from a force pump and so directed as to strike the aphids that are on the under-side of the leaves. Another remedy is whale oil soap dissolved in water at the rate of one pound of soap to five gallons of water, and is both safe and effectual. It is obvious that the earlier the application is made after the first brood is hatched the more effectual, and, moreover, the easier to get at the aphids, as when they become numerous they cause the leaf to curl backwards making it difficult to strike the aphids with the spray later on. This aphid does a great amount of injury and ought to be attended to with more thoroughness than heretofore, especially on cherries.



**7th. SCAB**—The only other very serious enemy affecting the apple is the scab and its allied fungi that attack the leaves and blight them or turn them partly brown and thus destroy their functions. Without strong, healthy leaves no tree or plant can thrive. It is quite as essential to look well after the health of the leaves as any other part of the tree. Until quite recently we have been helpless before this powerful enemy that has been steadily increasing in every department of horticulture, ever present, waiting only favorable weather to develop, most forms such as scab on apples and pears, leaf blight, plum rot, and curl leaf on peaches, developing rapidly in wet, cold seasons. But at last the remedy for all these various forms has been discovered. It must be borne in mind that the germs of this apple scab and blight are on the limbs and branches ready to develop at any time when the weather is suitable; hence the necessity of commencing the fight early. A thorough good spraying or soaking of every branch of the tree should be given by a solution of blue vitriol, one pound to twenty-five gallons of water, before any foliage has expanded, followed by a fine spray of Bordeaux mixture through a Vermorril or other equally good nozzle as soon as the foliage is fairly out and this again at intervals of two weeks until five sprayings in all have been given. The simple solution of blue vitriol can only be put on before the foliage comes out. After that the vitriol has to be neutralized by the lime added in the Bordeaux Mixture to prevent burning the foliage. For formula of Bordeaux Mixture see page 116. The last three sprayings may have added to the mixture four ounces Paris green to forty-five gallons of the mixture, to kill the codling moth, canker worm, etc., so that five sprayings in all kills all the enemies included in the divisions *one* and *three*.

## PEARS.

The chief enemies to pear culture are :

**1st. Scab on the fruit and Leaf Blight**—To be treated the same as apples, by one spraying of blue vitriol in solution followed by four sprayings of Bordeaux Mixture, in the last three of which Paris green has been added to kill curculio and slugs.

**2nd. SLUGS**—These are slimy snail-like slugs that sometimes eat the upper surface of the leaves of pears and quinces and if they should come on after the spraying season is over a light application of hellebore either in solution or as a dry powder will effectually destroy them.

**3rd. BLIGHT**—The only other enemy of any account besides these that interferes with successful pear growing is blight. This disease, so far, has been unconquered. It baffles the most skillful. There is this about it, however. Pears are not so subject to it on moderately heavy soil where the trees make a healthy but not too vigorous growth. Without doubt a preventative will soon be discovered. It may be that the regular spraying as described for scab and curculio will be a preventative if the disease is, as some suppose, produced by inoculation from germs carried from the outside through the atmosphere. It is essential to cut off all blighted branches six inches below the part apparently affected and burn these branches.



## PLUMS.

These are attacked by some very pronounced enemies, all of which, however, succumb readily to proper treatment.

**1st. BLACK-KNOT**—This great bugaboo has scared many from planting and yet is the easiest of all to conquer because if concerted action is taken it can be entirely eradicated from a township. It is a fungus or low form of plant life growing on the limbs of plum and cherry trees, which, if allowed to grow there, ripens its seeds which are too small to be seen with the naked eye. These are in turn carried by the wind to other trees, hence it is plain the way to attack it is to cut it off before it ripens its seeds, which, if persistently done, will soon get rid of it. This must be done before it has been allowed to spread all over the tree which usually takes two or three years. There is a law on the statute books of Ontario which can be put in operation at any time by fifteen ratepayers petitioning the township council, that will, if carried out thoroughly, rid any township of this pest that has destroyed almost all the sour cherries in Ontario and many plum orchards besides. Where this law is not in force, one can, if not surrounded by careless neighbors, keep black-knot at bay without difficulty by cutting it off and burning it. It is not enough to cut it off. It must be burned. Where a knot is on a limb that you do not want to cut off, scrape off the knot and rub the wound with coal oil which will kill the roots at once. It is likely the regular spraying with Bordeaux Mixture for rot will also kill the germs of the black-knot.

**2nd. ROT**—This is one of the pests belonging to the third division also, as black-knot does, but this attacks the fruit causing it to rot. The remedy is spraying with Bordeaux Mixture exactly as for apples, adding Paris green at the last three sprayings for curculio. This is not sufficient as we dare not spray with Bordeaux, which is poison, after the plums reach, say, half size as it sticks so tenaciously to the fruit that it might show on it. I don't think the quantity likely to stick to the fruit would poison a person even if he ate a bushel of plums; but a prejudice exists against it which we must not run counter to. If we do, the demand will fall off for fruit; so another mixture is applied after there is danger in applying Bordeaux and this is called "The Ammoniacal Solution of Copper-carbonate. See formula at the end. Two applications of this from the time the plums are half grown until they are full grown should ensure perfect specimens free from rot.

**3rd. APHIS**—Treated the same as aphid on apples.

**4th. CURCULIO**—This insect, which attacks not only plums but pears, cherries, apricots, and peaches as well, is perhaps the most difficult to fight of any of the pests that trouble the fruit grower; but the careful and skillful fruit grower does not fear it for if it were not for these pests fruit would be so easily grown in this favored climate that it would scarcely pay better than grain to grow; but as it is, there are so many



who neglect to care for their trees that the crop is never more than enough to command a good market somewhere. The curculio is a bug resembling somewhat the well-known pea-bug, that emerges from the ground, where it has passed the winter, about the time the blossoms are falling and commences at once to cut its crescent mark in the sides of the tiny plums inserting an egg in each slit which soon hatches and the larvae makes its way into the centre of the plum where it grows to maturity and falls to the ground with the plum, which soon drops off as a rule, and eventually crawls once more into the earth there to be transformed into the full grown curculio. It was supposed that by spraying just as the blossom falls and twice afterwards at intervals of a week that the tiny worm that is hatched in the crescent-shaped slit in the young plum would get a little poison and be placed hors de combat; but when we consider how difficult it would be to get the poison into the slit I think success must be along other lines. It is believed the parent curculio after it emerges from the ground lives upon the leaves; but if so, it would then be the proper time to spray, before she had stung the young plums, which would be while the plum is in blossom and that would kill many honey bees visiting the blossom and lodge poison in the blossom that might be stored in the hive and in turn kill some one. As a matter of fact it is against the law to spray while the trees are in blossom. My experience with spraying to kill curculio is not very satisfactory. However, when spraying with Bordeaux Mixture for leaf blight and rot, Paris green may as well be put into the mixture—four ounces per barrel of forty-five gallons. My cure for curculio is that adopted long before spraying was practised and now adopted by many of the largest growers in Canada and N. Y. State with absolute success, and simply consists in jarring the trees every day from the time the first curculio is found (just as the blossoms are falling) until no more can be found; usually about two or three weeks. This may seem a big job but with proper preparation it is not. The chief thing to guard against is bruising the tree when striking it; and for this purpose a soft but solid rubber mallet is best and with this strike the trunk of the tree if small or the large limbs on large trees. The best way, however, is to saw off a limb on each tree and strike on the stump with a wooden mallet or solid rubber one. The curculio are like opossums; they feign death and lie for some time curled up on the sheet they drop on as if dead. Taking advantage of this several trees can be jarred before it is necessary to gather them up. A sheet, of course, must be provided large enough to reach out at least as the longest limbs and where much jarring is to be done this sheet, which has a slit in the centre to allow it to pass the tree which will then stand in the centre of the sheet, is spread like an inverted umbrella on slats and the whole mounted on a cheap wheelbarrow. The operator, for only one is then required, runs his barrow under the tree, jars it until no more come down, backs out the machine, and goes on to the next until half a dozen or so are visited when the bugs must be brushed down to the centre where a hole is left in the sheet under which is a jar of coal oil or some other strong substance into which the curculio fall. This method of destroying curculio if followed up year after year will soon rid the orchard almost entirely of them, especially if you can persuade your neighbors to do the same. Many sorts of plums bear so heavily that the thinning by curculio is not more than ought to be done by hand; but if they are allowed to increase they entirely destroy some of the very finest plums that do not set so enormous a load as Lombards, Duane's Purple, and a few others. Every one that grows plums ought to jar their trees



regularly and then thin the plums by hand on those sorts that overload. The jarring should be done in the morning—as early as possible. A sure and easy way to grow plums free of curculio is to plant in a hen yard. The hens kill and eat the curculio as they emerge from the ground. To assist them the ground should be kept loose under the trees. In like manner hogs keep curculio down by eating the green plums as they fall containing the larvae.

## PEACHES.

**1st. CURL LEAF**—This is a sort of fungus and it is now claimed that it can be prevented by spraying with Bordeaux Mixture when the leaves are small, and with the blue vitrol and copper sulphate solution before the blossoms expand. If so it will save many crops.

**2nd. BORER**—This pest is much more troublesome with peaches than with apples and needs to be watched carefully. Prevention is better than cure and if the trunks of the trees are painted near the ground with the mixture recommended for apples they are not likely to be much troubled. The trees should be gone over every fall or spring and wherever gum is exuding near or even below the surface of the ground, look for the borers. Cut away the bark and dig them out, using, if need be, a piece of wire to trace them up.

**3rd. YELLOWS**—This is the only serious disease of the peach outside of curl leaf and so far baffles all efforts to cure it. The only method yet known to keep it in check is to cut out and burn the trees as soon as the disease is noticed which, in its early stages, is not easy to detect by one not accustomed to seeing it. Spindling water shoots in the heart of the tree and a general lack of healthy color in the leaves are two good indications, though the latter may result from borers or any other cause preventing healthy growth. As the season advances the tree gets more sickly and after two or three seasons dies. If any fruit is on the tree it will be more or less streaked with red and be more or less tasteless according to the stage of the disease. As this disease spreads with uncommon virulence it is highly essential to destroy the trees by burning as soon as they are known to be affected.

## CHERRY.

**1st. Black-Knot**—Treated the same as on plums.

**2nd. Aphis**—Treated the same as on apples and plums.

**3rd. Curculio**—Treated the same as on plums.

**4th. Rot**---This is the most serious difficulty in growing sweet cherries, but it is believed that a spraying with a solution of copper sulphate before the foliage appears and Bordeaux Mixture two or three times after and another with ammoniacal copper carbonate when the cherries get too large to be safe to spray longer with Bordeaux, will entirely prevent the rot, another form of fungi.

## QUINCE.

**N**O serious enemies trouble the quince. The slug, same as on pears, sometimes requires an application of hellebore, either powdered or in solution, and curculio sometimes stings a great many causing knotty specimens which remain on the tree like pears until ripe. If the curculio were kept in subjection by destroying all that came to the plum trees it is not likely there would be enough to do much injury to quinces and pears.

## GRAPES.

**T**HE only thing that seriously troubles grapes universally in Ontario is mildew. This is much worse some seasons than others. Much worse on land that produces a great growth of wood than on land that only produces a moderate growth and very much worse on some varieties than others ; but we find it pays to prepare for the worst every year and there is one sure and infallible cure. That is flour of sulphur or the finest possible form of sulphur and a grade that has a good strong sulphur odor is much more efficacious. This is applied immediately after the blossoms fall when the grapes are the size of small shot. When I say immediately I mean it positively, as a delay of a few days may cause the partial ruin of the crop, but if applied then and again at intervals of about ten days, in all three times, there is no danger of trouble with mildew at all. The sulphur is usually applied by simply casting it among the foliage with the hand as in sowing clover seed. About 50 to 100 pounds per acre is sufficient, depending on the number of applications, and it costs from 2 to 3 cents per pound.

In some parts of Ontario grape rot has appeared. This can be controlled, it is claimed, quite readily by the same method and treatment that cures the apple scab, plum rot, etc., viz. : a spraying of the vines before the foliage appears with the solution of copper sulphate and with Bordeaux Mixture after the foliage appears until grapes are



about half grown and after that with ammoniacal copper carbonate. In all about four applications. It is claimed this will also destroy the mildew, so that when rot is prevalent and this spraying is necessary there is no need of sulphur for the mildew and where rot is not prevalent the sulphur alone is needed.

**The Grape Vine Flea Beetle**—This is a steel blue bug about the size of a pea bug, that first attacks the buds as they begin to swell in the spring and a second brood lives upon the leaves in August but do not do much damage. Where this beetle is prevalent it is quite a serious nuisance, if let alone, but can easily be disposed of by spraying the vines with Paris green, or, to make a surer job, by daubing a little Paris green, mixed into a thin paint, with a brush on each bud before it opens in the spring. This may seem a big undertaking but is not after all. The vines being trimmed and tied up a quick boy can touch every bud on an acre in a day, and this a certain and sure cure. There are no other serious troubles in Ontario that affect the grapes except very locally.

## **RASPBERRIES.**

**1st. Rust**—This affects only black raspberries. The best remedy is to dig up and burn the affected plants as soon as seen. It is readily known by the yellow rust and sickly appearance of the plants. Doubtless in its early stages Bordeaux Mixture would kill it.

**2nd. Saw Fly**—This insect desposits its eggs on the leaves in the latter part of May and these, when hatched, feed on the leaf in June and cause the loss of more or less foliage that is necessary to the health of the plant. These can be readily destroyed by an application of hellebore in solution at the rate of one pound to a barrel of water, or dusted on the leaves with a blower when the leaves are damp. Wherever hellebore will answer the purpose it should be used instead of Paris green as it evaporates in two or three days and there is no positive danger of poisoning the fruit.

**3rd. The Tree Cricket**—This is the worst enemy of the raspberry grower. It is a species of cricket that lays its eggs in rows in the raspberry canes, weakening the canes so that they break off easily with the wind. The only practicable remedy seems to be to examine the canes and cut off the portion where the eggs are laid, burning it up. The slits where the punctures are made in which the eggs are laid can readily be seen.

## **CURRANTS.**

**1st. The Borer**—The borer is troublesome, especially as a plantation gets old. This is the larvae of a handsome little moth that lays its eggs near the buds,

which hatch in a few days and when hatched bore holes into the pith and there feed upon the pith and eventually cut passages out. By careful observation these holes can be detected on the limbs and all such limbs should be cut out when trimming as well as any suspected of having borers in by the unthrifty appearance of the bush. By care in this way the borer can be kept in subjection. Of course the trimmings should be burned at once.

**2nd. The Currant Worm**—As its name indicates is a worm, the larvae of the saw fly, and being extremely voracious will, if allowed to increase at will, in a very few years get so thick as to strip a patch completely. It is one of the easiest pests to manage that there is; diligence, watchfulness, and a little poison being required only, as this belongs to Class or Division No. 1. There are two broods. The first appears about May 20th, depending on the earliness of the season and this is the brood that should be exterminated sure. When first hatched they will always be found near the bottom and centre of the bush and as they grow climb up and spread all over it. If, after they are all hatched, hellebore is blown or dusted on the bushes when the leaves are damp it will be found very effectual, one can put it on only where the worms are seen and thus save the material. If put on in solution from a pump one needs to spray all the bushes as you cannot see from the wagon which ones not to spray. At this spraying Paris green at the rate of 2 or 3 ounces per barrel can be used and it is much cheaper than hellebore; but if the worms are not entirely exterminated at this time a second brood appears just before the currants are ripe and then Paris green cannot be used for it would be dangerous to eat the fruit. Hellebore must then be used either dry or in solution. My practice is to spray at the first spraying, before the fruit is set, with Bordeaux Mixture into which 4 ounces per barrel of Paris green is put. The Bordeaux sticks to the leaves all summer and the poison is on the leaves ready for the worms whenever they appear. The Bordeaux is applied to prevent leaf blight which sometimes causes the leaves to drop prematurely. The currant worm only attacks red and white currants and gooseberries. Black currants are exempt from its attacks.

**Currant Span Worm**—This sometimes attacks currants, black and red, and gooseberries, and must be treated with a strong solution of Paris green, about 4 ounces to 45 gallons of water as it is very tenacious of life.

## GOOSEBERRIES

### HAVE TWO TROUBLES.

**1st. The Currant Worm**—Which is easily destroyed if not neglected; the same as on currants.

**2nd. Mildew**—This dread disease, which is scarcely known in England or any country that gets sea breezes, has scared people from planting the larger sorts of English gooseberries, and has caused us to plant here in America, almost entirely, the small American sorts that are comparatively exempt from mildew; but there is no doubt that mildew is no longer to be feared. The remedy is bi-sulphate of potassium, 1 ounce in 4 gallons of water and sprayed on seven or eight times during the summer, commencing just after the leaves have expanded



# REMEDIES.



## **Copper Sulphate Solution.**

This is made by dissolving sulphate of copper (blue vitriol) at the rate of 1 pound to 25 gallons of water. This is for early treatment of all fungus diseases and cannot be applied after the foliage expands as it will burn it.

## **Bordeaux Mixture.**

Made by dissolving 4 pounds sulphate of copper in sufficient hot water to dissolve it and pouring into this through a coarse canvas a solution of quick-lime made by 4 pounds lime and about 6 gallons of water, and then diluting the mixture until it fills a barrel of 40 gallons. This is for all fungus diseases after the foliage is expanded and until the fruit is about half grown.

## **Ammoniacal Solution of Copper Carbonate.**

This is made by dissolving 3 ounces of copper carbonate in 2 pints of ammonia and when about to use dilute with 25 gallons of water. This is for fungus diseases after the fruit is nearly grown, when it would be unwise to use Bordeaux.

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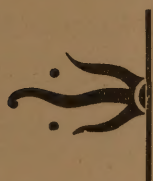
One quart soft soap, two quarts boiling water ; while hot add one pint of coal oil and mix thoroughly. In using dilute with an equal quantity of water. This must be made exactly by directions. If the coal oil rises to the surface it will burn the foliage ; but if made exactly by the receipt the coal oil will thoroughly mix with the water and soap and not injure the foliage at all, but kill every aphid it touches.

ESTABLISHED 1855.

# FRUITS

---

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.. The ST. CATHARINES ..

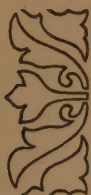
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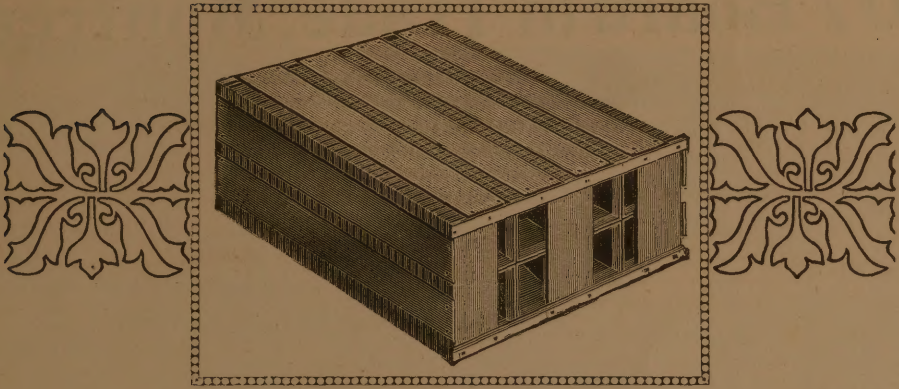
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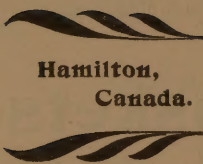
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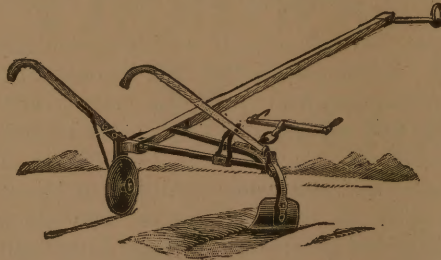
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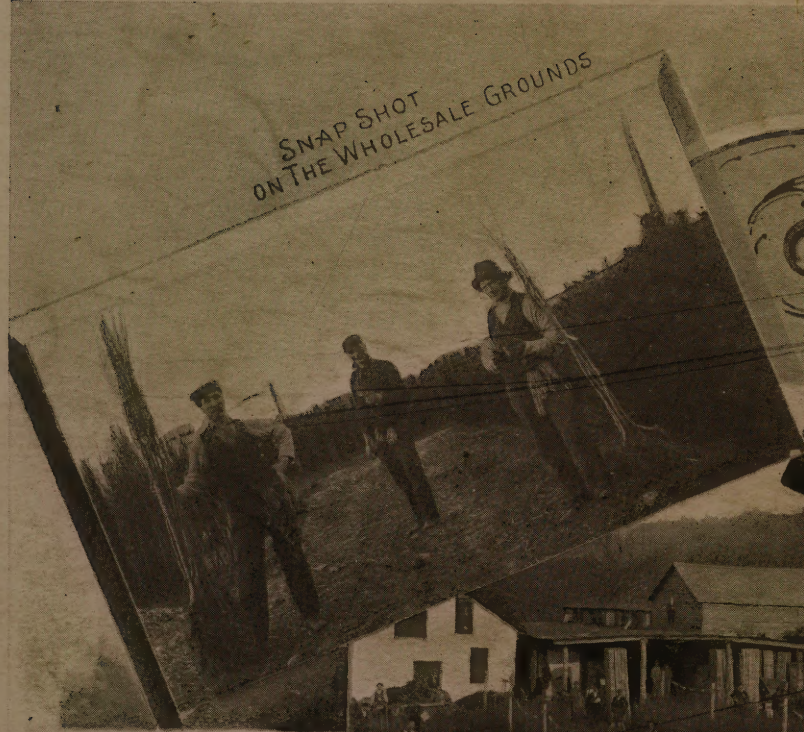
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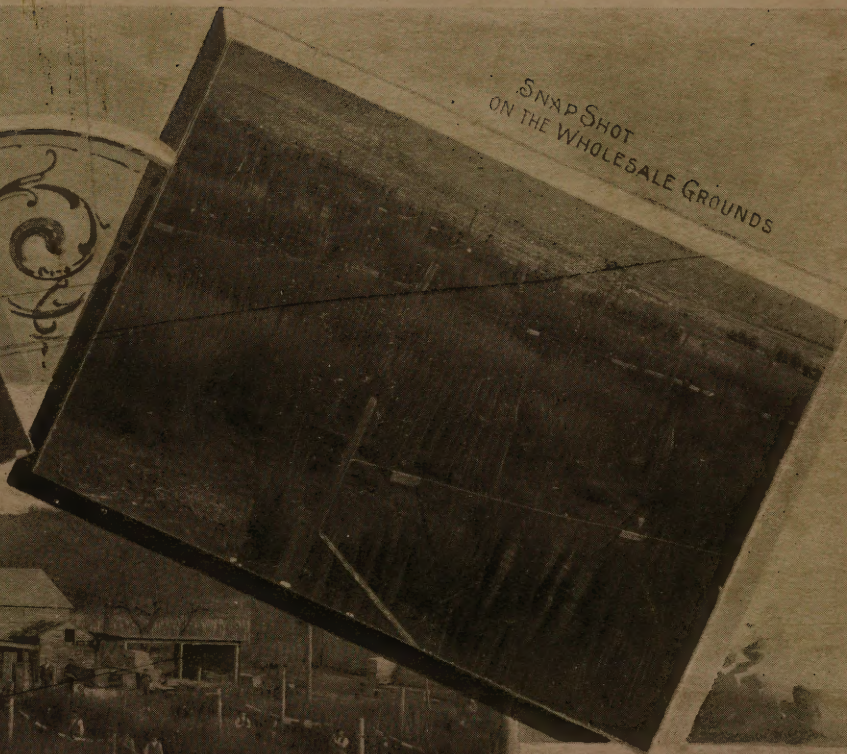




SNAP SHOT  
ON THE WHOLESALE GROUNDS



SNAP SHOT  
ON THE WHOLESALE GROUNDS



SNAP SHOT ONE END OF THE RETAIL PACKING GROUND. SPRING '98